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ABSTRACT

This volume, one of a series of concise but relatively exhaustive descriptions of the grammatical structures of the principal standard Slavic languages, contains an outline of Polish morphology. The four major sections are morphophonemics, nominal inflection, the Polish verb (Part 1--stem alternation and conjugation, and the Polish verb (Part 2--interparadigmatic alternation). A bibliography is included. (RL)

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OUTLINE OF POLISH MORPHOLOGY

by

Charles E. Bidwell

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DEDICATION

This work is dedicated to my friend Erdni Ulahaliev, a Kalmyk Mongol, who after wandering through many war-torn lands and political prisons found a tragic death from an implacable disease far from home and family, while still in his twenties and a student of Linguistics in Washington, D.C.

PREFACE

On June 8, 1971 Charles Bidwell died after a long illness. He retained until the last an active interest in linguistics and in completing a number of scholarly projects. It is both touching and appropriate that he dedicated this present volume to a former student of his who had himself succumbed to an incurable malady.

Professor Bidwell was a gentle and cultured man--a sound and productive scholar in Slavic linguistics, a learned and compassionate teacher. He was eminent in his profession and a vital force in the Department of General Linguistics. It is entirely fitting that his work be the first in a linguistic series sponsored by his department.

ACKNOWLEDGMENTS

Professor Bidwell had no opportunity to edit or proofread this manuscript. Special thanks to Professor Zdzislaw Mikulski of the Slavic Department at Ohio State University for his excellent job of proofreading the manuscript and to Professor Christina Bratt Paulston, Department of General Linguistics, University of Pittsburgh, for assuming the responsibility of seeing the manuscript through the publication process. The reader should recognize that some decisions on the contents had to be reached based on conjecture according to Professor Bidwell's probable wishes.

Edward M. Anthony
Professor and Chairman
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INTRODUCTION

The Polish language is spoken by well over 35 million people. The official language of the Polish republic and one of the cherished identity symbols of the Polish nation, it is the vehicle of a venerable and flourishing literary tradition. It is also spoken by small minorities in Czechoslovakia, namely in Těšín (Cieszyn) and in few spots in Slovakia, as well as by large numbers of emigrants in Western Europe, United States, Canada, Brazil, Australia, and other countries.

This work is another link in the author's effort to make available to English-speaking linguists and students of Slavic languages a series of concise but relatively exhaustive structural descriptions of the grammatical structures (and in particular the inflectional morphology) of the principal standard Slavic languages, especially of such for which complete and modern linguistic descriptions are not readily available.

Previous components of this project have been my Outline of Bielorussian morphology, 1967 (revised 1970), Outline of Ukrainian morphology, 1967 (revised 1971), Outline of Slovenian morphology, 1969, Outline of Czech morphology (in press, 1971), A morphosyntactic characterization of the Slavic languages, 1969--all the foregoing published by and available from the University of Pittsburgh Center for International Studies, as well as The Structure of Russian in Outline (University of Pittsburgh Press, 1969). Articles on Serbo-Croatian and Bulgarian taken together constitute structural sketches of those languages:

For Serbo-Croatian, see "The Serbo-Croatian comparative" Language 35.259-63 (1959), "The Serbo-Croatian verb" Language 40.532-50 (1964), "Serbo-Croatian syntax" Language 41.238-59 (1965), "The accent patterns

of the Serbo-Croatian noun" Folia Linguistica 2.38-48 (1968), and "Serbo-Croatian nominal inflection" in Studies 2.60-104 (1970, University of Zagreb). For Bulgarian, see "The adjective and pronoun systems of Bulgarian" in Studies in Slavic linguistics and poetics in honor of Boris O. Unbegaun (1968) p. 15-20, "The Bulgarian numeral" and "The stress patterns of the noun in Bulgarian" both in Studies in Linguistics 20 (1968), pp. 49-52 and 41-47 respectively, "A classification of the Bulgarian noun", forthcoming in the Shevelov-Festschrift, "The Bulgarian verb" in Glossa 3.241-266 (1969), and "Bulgarian syntax" in Linguistics 29.5-33 (1967).

My student, John Kochik, is preparing a study on Slovak inflectional morphology of similar aim and scope, which will be available as a dissertation from University Microfilms and, it is to be hoped, will be published.

Conventions and symbols used herein are those customary in linguistic writings, e.g. ∽ 'alternates with', ⟶ 'is replaced by', Ø 'zero'. Phonetic transcription is in square brackets [ ], phonemic transcription is in slant lines / /. Cases are abbreviated V N A G L D I, vocative, nominative, accusative, genitive, locative, dative, and instrumental respectively. V also stands for vowel, C for consonant, sg. for singular, and pl. for plural. The category of person is abbreviated 1. (first) 2. (second) 3 (third).

The style of presentation varies somewhat from other works in this series, as well as between the different component parts. This variance results from the fact that the components represent rewritings of material previously published; thus the morphophenemics was originally an article in General Linguistics 2 (1957), the verb section an article in General

Linguistics 4 (1960), both reproduced by permission, and the nominal morphology from a preprint dating 1965. As a consequence, the earlier studies were cast in a very strict item-and-arrangement pattern, whereas today I would probably give a larger place to process statements. Also, in the morphophenemics (Section I) all Polish examples are given both in normal orthography and in phonemics, in Section II, the nominal morphology, Polish examples are given primarily in the spelling, though affixes, stems, etc. are given in phonemics. (In Section II both the orthographic examples cited in text and the affixes and stems in phonemics are underlined). The material on the verb (III and IV) is all given phonemic transcription. I believe this will not constitute any great inconvenience to the linguistically oriented reader, who will be used to the utilization of transcriptions. Paragraph numbering in sections I and II is consecutive, while III and IV have separate paragraph numbering.

A word on terminology: Because the various components of this paper were written at various times, there are a few minor variances in terminology, which it was not always convenient to amend in the revised version. These are as follows: Thus, in a few cases in sections III and IV "general morphophonemic principles" is used for automatic morphophonemics. Also "retracted consonants" is sometimes used as a synonym for apico-alveolar consonants. In section IV throughout I use the term "root verb" for the basic unprefixed source verb, from which other verbs in the verb family are derived by prefixation and other processes. In later works on Slavic languages I have called such verbs "basic verbs", "primary verbs", and "unprefixed source verbs", while I prefer to reserve the term "root verb", to e-verbs whose stem consists of (optional prefix) plus a root

morpheme plus thematic vowel, but with no stem formative suffixes between root and thematic vowel (e.g. Pol. *nieść*, Rus. *n'est'í* 'to carry'). The concept is of little importance in Polish (see sections III 2.3.7.1-6 for further examples), but is of considerable importance in classifying the East Slavic verb.

The variety of speech described is modern standard spoken Polish. This study is based both on work with informants, primarily at the Foreign Service Institute in the late 1950's--here I want to mention and thank Mrs. Hania Prentiss (originally from Cracow), Adam Woyna and Henry de Uznański (both originally from Zakopane); I was also aided by Profs. Casimir Borkowski and Frank Mocha, both now of the University of Pittsburgh but once of Warsaw, and Prof. Tadeusz Gasinski, now of the University of Hawaii but once of Warsaw, but also on studies made by previous workers in Polish linguistics (see the bibliography at the end of this volume). All of those who contributed in any way to this study deserve my heartfelt thanks; any errors in it are, of course, the responsibility of the author alone.

Expenses involved in the compilation of the present study were covered by a Faculty Research grant from the Faculty of Arts and Sciences, University of Pittsburgh, which support is hereby gratefully acknowledged.

I

MORPHOPHONEMICS

1.0 Phonemics

1.11 The following phonemic analysis of Polish is assumed

	unrounded		rounded	
Vowels:	i	y	u	high
	e	a	o	non-high
	front	non-front		

Phonetically, /a/ and /y/ are lower than their respective partners on the low and high levels.

Consonants

	labial	apico-dental	apico-alveolar	predorso-palatal	palato-velar	velar
stops	p	t			k'	k
	b	d			g'	g
fricatives						
	f	s	š	ś		x [x'ʃ x]
	v	z	ž	ź		
affricates						
		c	č	ć		
		ʒ	ǯ	ʒ́		
nasals	m	n		ń		
apical trill:		r	semivowels	non-nasal		j w
lateral:		l		nasal		ʃ̃ w̃

A few remarks should be made concerning some of the individual phonemes. /p b f v m/ have palatalized allophones before /i/ and /j/ (more or less palatalized depending on the speaker). /x/, normally voiceless, has a voiced allophone before voiced consonants. /w̃/ and /j̃/ occur only in postvocalic position and /j̃/ only between vowel and consonant (i.e. not before vowel or juncture). /w̃/ represents nasalization of the preceding vowel, plus, in deliberate speech, a high back semivocalic off-glide. This off-glide does not occur in rapid speech. /j̃/ represents nasalization of the preceding vowel plus a high front nasalized off-glide. This off-glide is always present in all styles of standard speech. Nasalization [̃] is lost in final position, except in formal speech, /w̃/ being replaced by /w/.

My analysis (and I was preceded in this by various Polish scholars) departs from the traditional phonemic analysis of Polish vowels, which treats [y] and [i] as allophones of one phoneme. I reject this because of contrasts such as

[y]	[i]
chyba /xyba/ 'probably'	chiński /xij̃sk'i/ 'Chinese'
typ /typ/ 'type'	tik /tik/ 'tic'
dyskurs /dyskurs/ 'discourse'	ditto /dito/ 'ditto'
y /y/ 'letter <u>y</u>'	i /i/ 'letter <u>i</u>'

1.1.2 Suprasegmental phonemes.

Word stress /ˌ/ occurs on but one syllable in any word, contrasting with lack of stress on other syllables. In the overwhelming majority of polysyllabic words it is on the penultimate syllable, exceptions being a fair number of recent borrowings, as <u>Amˌeryka</u> 'America' or <u>gramˌatyka</u> 'grammar' and a very small number of native items as <u>okˌolica</u> 'surroundings'

where some speakers at least stress a syllable other than the penultimate. A very small class of words, the (en- and pro-) clitics, have no stress.[1] Monosyllabic words other than clitics stress their single syllable. Within the utterance, word stress may be strengthened to major stress (usually each major segment has one word bearing major stress).

Two transitions are assumed minor or "open" /+/ and major /‖/. Major juncture may occur alone or be accompanied by prepausal rising /^/ or prepausal falling /v/ intonation contour. Stretches between two major junctures or major juncture and pause are termed "major segment" (equals Hockett's "macrosegment").

1.1.3 The Polish writing system

As many of the examples below are given in conventional Polish spelling, it is necessary to explain how the conventional spelling represents the phonemes of the language.

Vowels. The vowels in Polish are represented by the same symbols we use in phonemic transcription, i.e. a e i y o u, with addition that /u/ is also represented by ó, when it comes historically from Old Polish long /ō/: czas /čas/, pies /pjes/, pić /pić/, dym /dym/, dom /dom/, mur /mur/, wół /vuw/. Further /e/ and /o/ plus /w/ (or sometimes other nasal consonant) are written ę and ą respectively (representing earlier nasal vowels). Thus, kęs /kẽws/, wąs /võws/.

Labials. /p b f m/ are represented by the same symbols we use in transcription; /v/ is written w: pić /pić/, bić /bić/, fala /fala/, myć /myć/, woda /voda/. Labial plus /j/ (which appears only before vowel) is written labial plus i: piasek /pjasek/ wieś /vjeś/.

Apico-dentals. /t d s z c n/ are represented by the same symbols we use in transcription; /ʒ/ is written dz: ton /ton/, dom /dom/, sen /sen/,

zona /zona/, cap /cap/, noga /noga/, dzwon /ʒvon/.

Velars. /k g/ are represented by the same symbols we use in transcription; /x/ is written ch: kasa /kasa/, grać /grać/, chyba /xyba/

Palato-velars. /k' g'/ are represented by k g before /i/ and by ki gi before other vowels: kij /k'ij/, kiedy /k'edy/, gips /g'ips/, giąć /g'owć/.

Predorso-palatals. /ś ź ć ń/ not followed by vowel are represented by the same symbols we use in transcription; /ʒ́/ is written dź. Followed by /i/, the foregoing phonemes are written s z c n dz. Followed by vowel other than /i/, they are written si zi ci ni dzi.

not before vowel	before /i/	before other vowel
dziś /ʒ́iś/	siła /śiwa/	siano /śano/
źle /źle/	zima /źima/	ziarno/źarno/
pić /pić/	cicho /ćixo/	ciekawy /ćekavy/
koń /koń/	nic /ńic/	nie /ńe/
dźwig /ʒ́vik/	dziś /ʒ́iś/	działo /ʒawo/

Apico-alveolars /š č ǯ/ are represented by sz, cz, dż respectively; /ž/ is usually represented by ż, but also by rz, if it derives historically from a palatalized /r'/: sztuka /štuka/, czas /čas/, żart /žart/, Rzym /žym/.

Other sounds /r l j/ are written with the same symbols we use in transcription, while /w/ is written with "barred" ł. /w̃/ along with preceding vowel is represented by ę or ą, while /j̃/ is represented by ń: rada /rada/, rola /rola/, rój /ruj/, kęs /kew̃s/, wąs /vow̃s/, koński /koj̃ski/. Neutralization of voicing in word-final position and various phenomena of assimilation are not represented in the conventional spelling, it being morphophonemic in this respect. "Silent" ł is written in some forms, as in wiódł /vjut/ 'he led'.

1.2 Morphophonemic change is understood for the purposes of this study to be any phonemic replacement, addition or subtraction, which takes place in a set of morphemes when they are shifted from one phonologically or morphologically comparable environment to another. In this study I shall not ordinarily treat alternations occurring in classes containing only one member.

I shall first treat those morphophonemic changes which are determined by the phonological structure of the language and which affect every morpheme which occurs under the conditions stated for the change. I term such changes automatic morphononemic change. I shall list as a sub-group within this class morphophonemic changes resulting from differences in style. I shall then treat those morphophonemic changes which affect only limited groups of morphemes, for example, morphemes, in certain form-classes or morphemes which must be listed. I term these latter changes non-automatic morphophonemic changes. The member of an alternation which occurs in the position of maximum differention is termed the basic alternant.

Two or more morphophonemic changes may occur in the same morpheme. Thus in the word robota /robota/ 'work' we have the changes /o ∽ u/ (genitive plural robót /robut/) and substitutive softening (locative singular robocie /roboće/. These changes affect different constituent phonemes of the morpheme and occur independently of each other.

Some morphophonemic changes never occur except in the presence of some other specific morphophonemic change. In such a case the two changes do not occur independently, but change a (which never occurs except in presence of change b) is conditioned by the occurrence of change b. Thus change /e ∽ a/ (see 1.5.2.1.2 below) is conditioned by the occurrence of

substitutive softening in the following consonant. Change b however (in the example, substitutive softening) may occur without change a. (If a and b never occurrred in each other's absence, they would constitute not two, but one morphophonemic change.)

Two morphophonemic changes may occur independently of each other in some morphemes, but exhibit parallel occurrence in another set of morphemes. Thus, both /e ∽ Ø/ and substitutive softening occur independently in a large number of morphemes, but there is also a large set of morphemes where the consonant preceding /e ∽ Ø/ undergoes substitutive softening, showing stage II when e is present and stage I before zero. What I have termed / e ∽ Ø/[2] (see 1.5.2.1.5 below) for ease of description are really parallel occurrences of /e ∽ Ø/ and substitutive softening. Likewise, /o ∽ Ø/[1] represents parallel occurrence of /o ∽ Ø/ and substitutive softening.

Frequently two or more morphophonemic changes may affect the same consituent phoneme of a given morpheme. Thus, in the word chleb /xlep/ 'bread' voiced-voiceless alternation (1.3.1.2) and substitutive softening (1.5.1.1) both affect the base-final consonant. When two morphophonemic changes affect the same phoneme, we may say that they occur in combination. Combinations of an automatic and a non-automatic change as in the example above are quite common, and combinations of two or more non-automatic changes are not infrequent.

In Polish, simple morphophonemic changes (those which do not represent combinations of more than one change) usually consist of only two alternants. Substitutive softening changes are an exception (see 1.5.1.1 below). Here we may see three replacements constituting a single morphophonemic change. Thus, jazda /jazda/ 'ride, journey'; jeżdżę /jeˇˇʒˇˇ ɛ̃w̃/ 'I'm riding'; jeździ /jeźˇˇʒˇˇi/ 'he's riding'.

In a combination of morphophonemic changes the principal alternation is that whose alternants in turn undergo subordinate alternations. Thus, if we have simple alternations a ∽ b and a ∽ c, a combination of the two with a ∽ b as principal alternation and a ∽ c as subordinate will result in (a ∽ c) ∽ b (example: /(o ∽ u) ∽ a/, (1.5.2.5 below). Sometimes the subordinate alternations may have further alternations subordinate to them. Thus /(e ∽ (o ∽ u)) ∽ a/ where the principal alternation is /e ∽ a/, the subordinate /e ∽ o/[2], and subordinate to the latter /o ∽ u/ (see 1.5.2.5 below). Occasionally, we may have a combination of changes where the principal alternation does not occur independently. Thus, we have /(n ∽ ń) ∽ w̃/ (1.5.1.2.1 below) though we never have /ń ∽ w̃/ or /n ∽ w̃/ as independent alternations.

In listing morphophonemic changes I have not noted combinations of automatic and non-automatic changes.

Note that a purely automatic change will be superseded, i.e. will not occur, if a non-automatic change is superimposed upon it. In this sense the non-automatic changes take precedence. Thus the root /mog-/, appearing in its basic form mogɤa /mogwa/ 'she could', undergoes automatic replacement of voiced /g/ by voiceless /k/ in mógɤ /muk/ 'he could'. The same automatic change, required because of the voiceless consonant of the following formant, is superseded and does not occur, when non-automatic replacement of /g/ by zero occurs in the infinitive form móc /muc/ 'to be able' (/mog-/ plus infinitive formant deletes /g/ and changes the vowel by non-automatic /o ∽ u/[1], giving /mu-c/).

On the other hand, the alternants resulting from non-automatic changes are always affected by automatic changes demanded by the new sequences they create. In this sense one may say the non-automatic changes are ordered to occur first, followed by the automatic. Thus the same root-final /g/

undergoes substitutive softening to /ž/ (stage I to IIa) in pomóż /pomuš/ 'help' (cf. pomogła /po-mog-w-a/ 'she helped') but /ž/ then undergoes automatic change to /š/ in word-final position.

The basic form of a morpheme is understood to be the form that appears in the position of maximum possibility of differention, i.e. with the fewest possible constraints and limitations imposed by the phonotactic rules of the language. It is upon this basic form that the automatic and non-automatic morphophonemic rules operate, yielding other, derivative forms.

1.3 Automatic morphophonemic changes.

1.3.1 For morphophonemic purposes Polish consonants may be classed as voiced, voiceless, and neutral. Neutral are /m n ń r l w j w̃ j̃/. With the exception of /x/, which has no counterpart, voiced and voiceless phonemes occur in pairs. The pairs are articulated in the same position, the voiced and voiceless counterparts being distinguished by the presence or absence of voicing.

Voiced:	b d g' g v z ź ž ʒ ʒ́ ǯ
Voiceless:	p t k' k f s ś š c ć č x

1.3.1.1. Neutral consonants may enter into clusters with consonants of any category--neutral, voiced, or voiceless. Voiced and voiceless consonants occur in slusters with consonants of their own category, or with neutral consonants. When morphological processes juxtapose voiced and voiceless consonants, the last voiced or voiceless consonant of the cluster remains unchanged, and preceding consonants of the cluster, except /x/, are replaced by their counterparts, so as to agree in regard to voicing with the last voiced or unvoiced consonant of the cluster.

However, /v/ assimilates to an adjacent consonant, whether preceding or following.

mówić /muvić/ 'to speak' mówcie /mufće/ 'speak!'

Warszawa /varšava/ "Warsaw' warszawski /varšafski/ "Warsovian'

tak /tak/ 'so' także /tagže/ 'also'

1.3.1.2 Vowels and neutral consonants appear freely in word-final position. In word-final position before major juncture voiceless, but not voiced, consonants may appear. When the word is immediately followed, without major juncture, by a word beginning with a voiced consonant, voiced, but not voiceless, consonants may appear. Followed immediately by a word beginning with a voiceless consonant, voiceless, but not voiced, consonants may appear in word-final position. Followed immediately by a word beginning with a vowel or a neutral consonant, some varieties of the standard language permit voiceless, but not voiced consonants. Other varieties contrariwise permit voiced, but not voiceless, consonants. When morphological processes cause a morpheme otherwise ending in a voiced or voiceless consonant to appear in word-final position, the word-final consonant, unless it is /x/, will be replaced by its counterpart whenever required by its position before pause, vowel, or neutral consonant, or before voiced or voiceless consonant. If the word-final consonant is /x/ (which functions as a voiceless consonant, but has no voiced counterpart), a voiced allophone will appear in those positions where a voiced counterpart would be required.

talerz /taleš/ 'plate' talerza /taležа/ 'of a plate'

Wacław /vacwaf/ 'Wenceslas' Wacława /vacwava/ 'of Wenceslas'

Kazimierz pisze /kaźˌimješp'iše/ 'Casimir is writing'

Kazimierza /kaźimježa/ 'of Casimir'

Staś dojedzie /staźdoj'eʒ́e/ 'Stan'll drive here'

Stasia /staśa/ 'of Stan'

kot bawi się /kˌodb'aviśe/ 'the cat's playing'

kota /kota/ 'of the cat'

Kazik odpowiedział /kˌaźigotpovj'eʒ́aw/ or /kˌaźikotpovj'eʒ́aw/

'Casimir answered' Kazika /kaźika/ 'of Caz'

Kazik nie mówi /kˌaźiǵem'uvi/ or kˌaźikḿem'uvi/ 'Caz isn't talking'

1.3.2 Clusters consisting of dental fricatives with palatal or alveolar fricatives do not occur. When grammatical processes bring elements together in such a way that such a cluster would otherwise occur, a preceding dental fricative is assimilated to a following palatal or alveolar fricative.

z ojcem /zojcem/ 'with father' z mamusią /zmamuśȭ/ 'with mother'

z tobą /stobȭ/ 'with you' z siostrą /śśostrȭ/ 'with sister'

z ziemią /źźemjȭ/ 'with the earth' z ciotką /śćotkȭ/ 'with auntie'

z dziewczyną /źʒ́efčynȭ/ 'with a girl' z szablą /šš̌ablȭ/ 'with a saber'

z żoną /žžonȭ/ 'with my wife' z Czesławem /šč̌eswavem/ 'with Czeslaw'

z dżdżownicą /žžovńicȭ/ 'with an earthworm'

sseą /sseȭ/ 'I'm sucking' ssiesz /śśeš/ 'you're sucking'

trzasł się /čšȭs+śe/ or/čšȭśśe/ 'he trembled'

niosła /ńoswa/ 'she carried' nieść /ńeść/ 'to carry'

zetnę /zetneȭ/ 'I'll cut' ściąć /śćońć/ 'to cut'

zaniósł /zańus/ 'he took there' zaniósłszy /zańuššy/ 'having taken there'

1.3.3 /n/ never appears before a palatal consonant. If grammatical processes would otherwise cause an /n/ to appear before such a consonant, the /n/ is replaced by /ń/.

panna /panna/ 'young lady' o pannie /opaṕ̀ńe/ 'about young lady'

lont /lont/ 'fuse' o loncie /oloń́ce/ 'about a fuse'

ląd /lont/ 'land' o lądzie /oloń́ʒe/ 'about land'

zwierzęta /zvježenta/ 'animals' zwierzęcia /zvježe̋ńća/ 'of an animal'

zgięty /zgjenty/ 'bent' zgięcie /zgjeńće/ 'bending'

1.3.4 Except as a result of prefixation, clusters consisting of the dental fricatives /s/ and /z/, plus /l/, /ń/, or /mj/ do not occur within the domain of the word, unless the fricative is preceded by /r/ or /w/.[2] Therefore, if as a result of any morphological process except prefixation such a cluster would otherwise occur within the boundary of a word, the /s/ or /z/ is replaced by its palatal counterpart /ś/ or /ź/. Thus:

masło /maswo/ 'butter' o maśle /omaśle/ 'about butter'

wiosna /vjosna/ 'spring' o wiośnie /ovjośńe/ 'about spring'

pasmo /pasmo/ 'belt, strip' o paśmie /opaśmje/ 'about a strip'

węzet /ve̋wzwa/ 'knot' o węźle /ove̋źle/ 'about a knot'

mężczyzna /me̋šč̆yzna/ 'man, male person' o mężczyźnie /ome̋šč̆yźńe/ 'about a man'

komunizm /komuńizm/ 'communism' o komunizmie /okomuńiźmje/ 'about communism'

niosła /ńoswa/ 'she carried' nieśli /ńeśli/ 'they carried'

wiozła /vjozwa/ 'she transported' wieźli /vjeźli/ 'they transported'

cisnąć /ćisnońć/ 'to press' ciśnięcie /ćiśńeńće/ 'pressure'

but:

nieść /ńeść/'to carry' roznieść /rozńeść/ 'to distribute by carrying' (or /roz+ńeść/)

marznę /marzne̋/ 'I'm freezing' marznie /marźńe/ 'he's freezing'

pełzła /pewzwa/ 'she crawled' pełzli /pewzli/ 'they crawled'

1.3.5 Word-final clusters of the type /Cj/ do not occur. If as a result of morphological processes such a cluster would otherwise occur in word-final position, as, for example, if a morpheme otherwise ending in Cj were to appear in word-final position, the /j/ is dropped.

ziemia /źemja/ 'earth, land' ziem /źem/ 'of lands'

gołębia /gowembja/ 'of a pigeon' gołąb /gowomp/ 'pigeon'

brwią /brvjo͂w̃/ 'with an eyebrow' brew /bref/ 'eyebrow'

złapiesz /zwapješ̆/'you'll catch' złap /zwap/ 'catch'

1.3.6.1 The combination of labial consonant (represented by B) plus /j/ plus /i/ does not occur. If morphological processes would otherwise cause /Bj/ to appear before /i/, the /j/ falls.

premja /premja/ 'premium' o premii /opremi/ 'about a premium'

ziemia /źemja/ 'earth, land' o ziemi /oźemi/ 'about land'

gołębia /gowembja/ 'of a pigeon' gołębi /gowembi/ 'pigeons'

brwią /brvjo͂w̃/ 'with an eyebrow' brwi /brvi/ 'of an eyebrow'

1.3.6.2 The sequence CjC does not aoocur. If morphological processes would otherwise cause such a sequence to appear, the /j/ falls.

złapiesz /zwapješ̆/ 'you'll catch' złapmy /zwapmy/ 'let's catch'

ziemia /źemja/ 'land, earth' ziemski /źemski/ and ziemny /źemny/ 'pertaining to earth or land'

1.3.7.1 Word-final /Cw/ does not occur except before an enclitic. When morphological processes would otherwise cause the occurrence of such a cluster, /w/ falls.

spadło /spadwo/ 'it fell' spadł /spat/ 'he fell'

1.3.7.2 The sequence CwC does not occur. When morphological processes would otherwise cause the occurrence of such a sequence, /w/ falls.

jabłek /jabwek/ 'of apples' jabłka /japka/ 'apple's'

1.3.8 When morphological processes would otherwise cause /t/ to be followed by /c/, the /t/ falls. Thus ojciec /ojćec/ 'father' (stem /ojtc-/ with substitutive softening of /t/ before movable /e/, see 1.5.2.1.5 below), genitive ojca /ojca/.

1.3.9.1 The sequence /Vtš̆V/ does not occur. When morphological processes would otherwise cause such a sequence to appear, /t/ is replaced by /č̆/.

wiatr /vjatr/ 'wind' o wietrze /ovječ̆č̆še/ 'about wind'

1.3.9.2 The cluster /č̆š̆/ does not occur in word-final position or before another consonant. When morphological processes would otherwise cause /č̆š̆/ to appear in word-final position or before a consonant, the /š̆/ falls.

popatrzyć /popač̆š̆yć/ 'to look' popatrz /popač̆/ 'look!'

popatrzmy /popač̆my/ 'let's look'

1.3.10 /i/ never occurs after the retracted consonants /š̆ ž̆ č̆ ʒ̆/ or the dental affricates /c/ and /ʒ/. When morphological processes would otherwise cause an /i/ to appear after such a consonant, the /i/ is replaced by /y/.

bronić /broń́ić/ 'to defend', kupić /kupić/ 'to buy', but

uczyć /učyć/ 'to teach'

wsi /fś́i/ 'of a village', brwi /brvi/ 'of an eyebrow', but

rzeczy /ž̆ečy/ 'of a thing', nocy /nocy/ 'of night'

Francuzi /francuźi/ 'Frenchmen', chłopi /xwopi/ 'peasants', but

Norwedzy /norveʒy/ 'Norwegians', Polacy /polacy/ 'Poles'

1.3.11 /y/ never occurs after the palatal consonants /x́ ź ć ʒ́ ń/, the semivowel /j/, and two of the velars /k/ and /g/. When morphological processes would otherwise cause /y/ to appear after such a consonant, it is replaced by /i/; simultaneously /k g→k' g'/ (see 1.3.12). Thus, in the adjective paradigm we have from the base /star-/ 'old' stary /stary/, starym /starym/, starych /staryx/, starymi /starymi/, but from /tań-/ 'cheap' and /polsk-/ 'Polish' we have tani /tańi/, tanim /tańim/, tanich /tańix/, and polski /polsk'i/, polskim /polsk'im/, polskich /polsk'ix/, polskimi /polsk'imi. In the noun paradigms we have psy /psy/ 'dogs' but ptaki /ptaki/ 'birds' and głowy /gwovy/ 'of a head', królewny /krulevny/ 'of a queen', macochy /macoxy/ 'of a stepmother', but ręki /renk'i/ 'of a hand', nogi /nog'i/ 'of a foot', kawiarni /kavjarńi/ 'of a cafe', szyi /šyji/ 'of a neck'. We also have rozbudowywać /rozbudovyvać/ 'to be building up', pokazywać /pokazyvać/ 'to show', but polegiwać /poleg'ivać/, 'to be lying around'.

1.3.12 Whenever within the boundary of a word morphological processes would otherwise cause a /k/ or /g/ to be followed by /e/ not followed by /w̃/ or nasal plus stop (i.e. not from former —and orthographic —ę) or to be followed by /i/, /k g/ are replaced by /k' g'/.[3] To reiterate: /k g/ before /e/ (except /e/ plus /w̃/ or nasal plus stop) and /i/→/k' g'/. Let us examine some examples from the adjective paradigm on the bases /star-/ 'old', /polsk-/ 'Polish', and /ubog-/ 'poor': stare /stare/, starego, /starego/, staremu /staremu/, starej /starej/, starych /staryx/, but polskie /polsk'e/, polskiego /polsk'ego/, polskiemu /polsk'emu/, polskiej /polsk'ej/, and ubogie /ubog'e/, ubogiego /ubog'ego, ubogiemu /ubog'emu/, polskich /polsk'ix/, ubogiej /ubog'ej/, ubogich /ubog'ix/. A further example, the instrumental singular from one of the noun paradigms on the bases /xwop-/ 'peasant', /polak-/ 'Pole', and /norveg-/ 'Norwegian':

chłopem /xwopem/, Polakiem /polak'em/, Norwegiem /norveg'em/.

1.3.13 Whenever an inflexional morpheme (suffix, formant or ending) otherwise beginning with a vowel follows a morpheme ending in a vowel with no intervening phoneme (zero allomorphs may intervene), the inflexional morpheme will be realized in an allomorph with an added initial /j/. Compare nieść /ńeś-Ø-ć/ 'to carry', niesiesz /ńeś-e-š/ 'you carry' with myć /my-Ø-ć/ 'to wash' myjesz /my-je-š/ 'you wash', pić /pi-Ø-c/ 'to drink', pijesz /pi-je-š/ 'you drink', czuć /ču-Ø-ć/, 'to feel' czujesz /ču-je-š/ 'you feel'.

1.3.14 /w̃/ never appears before stops or affricates. When a morphological process would otherwise cause /w̃/ to appear before a stop or affricate, /w̃/ is replaced by /m/ before nasal stops, /ń/ before palatal affricates and palato-velar stops, and /n/ before all other stops and affricates.

zgiąwszy /zg'ow̃fsy/ 'having bent' zgięty /zg'enty/ 'bent'
zgiąć /zg'oń́ć/ 'to bend'

1.4 Morphophonemic changes conditioned by style.

1.4.1 In non-deliberate speech of ordinary conversational speed, /n/ and /ń/ followed by a fricative tend to be replaced by /w̃/ and /j̃/ respectively. It is extremely difficult to state general rules on this point, as individual lexical items present considerable variation. In general, replacement is the more likely to take place the more familiar (statistically frequent in occurrence) the lexical item involved is. Thus, in words of great frequency of occurrence, the replacement will take place even in quite deliberate speech, while in less frequently occurring words, particularly learned words borrowed from other languages, replacement may be avoided even in normal conversation. One may also say that there is a slightly greater tendency

for /ń/ to be replaced than /n/, and that /n/ is less readily replaced before labial fricatives than before others. Thus we have:

konszachty 'intrigues, conspiracy' usually /kowšaxty/,
/konšaxty/ possible.

inżynjer 'engineer' /iwžyńer/ or /inžyńer/

inspiracja 'inspiration' /iwspiracja/ or /inspiracja/

inszość 'difference' /iwšość/ or /inšość/

infant 'infant' /infant/ more usual, but /iwfant/ quite possible

tynf (name of an obsolete coin) /tynf/ usual, but /tywf/ possible

czynsz 'rent' /čywš/ almost always, /čyns/ barely possible

tańszy 'cheaper' /tajšy/ almost always, rarely /tańšy/

słońszy 'saltier' /swojšy/ almost always, rarely /swońšy/

Kamiński (a family name) almost always /kamijški/, /kamiński/
possible only in the most deliberate speech.

1.4.2 In normal colloquial speech /w/ does not appear before /l/ and /w/. Thus, when morphological processes cause /w/ to appear before /l/ and /w/, the /w/ is normally lost. It can however be preserved in deliberate speech. Thus:

gięła 'she was bending' /g'ewa/, /g'ewwa/

gięli 'they were bending' /g'eli/, /g'ewli/

The above statement is formulated to cover the total Polish structure, but it comes into effect only in the l-forms of e type verbs with bases or stem-suffixes ending in nasals.

1.4.3 In word-final position /w/ does not occur in many varieties of colloquial speech. Some speakers replace /w/ with /w/ after /e o/, while others replace /w/ with /w/ after /o/, but drop /w/ altogether after /e/

mogę 'I can' /mogew/ or /moge/ coll., /mogew̃/ deliberate

kobietę 'woman' (Asg.) /kobjetew/ or /kobjete/ coll., /kobjetew̃/ delib.

krzykną 'they'll shout' /kšyknow/ coll., /kšyknow̃/, delib.

tą 'this (f. Asg.)' /tow/ coll., /tow̃/ delib.

1.4.4 In rapid speech unstressed /e/ between consonants (particularly in a syllable immediately following a stressed syllable) tends to be replaced by /y/ (excepting after consonants which/y/ does not follow, where it is replaced by /i/). Thus:

wolniej 'more slowly' /volńej/ or /volńij/

też 'also' /teš/ or /tyš/

przypatrzeć się 'to look at' /pšypačšeć+śew̃/ or /pšypačšyćśe/

1.5 Non-automatic morphophonemic changes.[6]

1.5.1 Consonant changes.

1.5.1.1 Substitutive softening.

Between the allomorphs of many single morphemes we note consonantal alternations. Thus we have:

w → l

szkoła /škow-a/ 'school' o szkole /o-škol-e/ 'about school'

n → ń

żona /žon-a/ 'wife' o żonie /o-žoń-e/ 'about my wife'

r → (ž ∽ š)

kara /kar-a/ 'fine' o karze /o-kaž-e/ 'about a fine'

siostra /śostr-a/ 'sister' o siostrze /o-śostš-e/ 'about sister'

We see that /r/ alternates with both /ž/ and /š/, /š/ occurring only when the preceding segmental phoneme is a voiceless consonant, /ž/ occurring otherwise.

In a similar frame we have labial consonants alternating with labial plus /j/:

baba /bab-a/ 'old woman' o babie /o-babj-e/ 'about an old woman'

mapa /map-a/ 'map' o mapie /o-mapj-e/ 'about a map'

trawa /trav-a/ 'grass' o trawie /o-travj-e/ 'about grass'

szafa /šaf-a/ 'cupboard' o szafie /o-šafj-e/

firma /firm-a/ 'firm' o firmie /o-firmj-e/

Now let us examine some other consonants in like frames:

kosa /kos-a/ 'scythe' o kosie /o-koś-e/

skaza /skaz-a/ 'defect, blemish' o skazie /o-skaź-e/

zapłata /za-pwat-a/ 'payment' o zapłacie /o-za-pwać-e/

przygoda /pšy-god-a/ 'occasion' o przygodzie /o-pšy-goʒ́-e/

zemsta /ze-mst-a/ 'revenge' o zemście /o-ze-mść-e/

jazda /jazd-a/ 'trip' o jeździe /o-jeź́-e/

In the same morpheme we note a further change:

kosi /koś-i-Ø/ 'he mows' koszę /košʷ-e-w̃/ 'I mow'

skazi /skaź-i-Ø/ 'he'll blemish' skażę /skažʷ-e-w̃/ 'I'll blemish'

płaci /pwać-i-Ø/ 'he's paying' płacę /pwac-e-w̃/ 'I'm paying'

godzi /goʒ́-i-Ø/ 'he agrees' godzę /goʒ́-ew̃/ 'I agree'

mści się /mść-i-Ø-śew̃/ 'he takes revenge' mszczę się /mšč-e-w̃-śew̃/ 'I take revenge'

jeździ /jeź́-i-Ø/ 'he rides' jeżdżę /ježʲ-e-w̃/ 'I ride'

Let us examine the velar consonants in the same fashion:

ręka /renk-a/ 'hand' o ręce /o-renc-e/ 'about a hand'

rączka /ronč-k-a/ 'little hand'

noga /nog-a/ 'foot' o nodze /o-noʒ-e/ 'about a foot'

nóżek /nuž-ek-Ø/ 'of little feet'

mucha /mux-a/ 'fly' o musze /o-muš-e/ 'about a fly'

cichy /ćixy/ 'quiet' cisi /ćiśi/ 'quiet (plural)'

When /w n r/ and the labials show only one alternation in these frames, /t d s z k g x/ each show two replacements. For the purpose of classifying

these alternations /w n r p b f v m t d s z k g x/ will be termed stage I. /l ń (ž ∽ š)/ will be termed stage II with relation to /w n r/ as will each labial plus /j/ in relation to the corresponding labial without /j/. /ć ʒ́ ś ź č ž š/ will be termed stage IIa and /c ʒ š ž c ʒ ś/ stage IIb in relation to /t d s z k g x/. Every Polish consonant except /j/ and the nasal semivowels appears either as stage I or stage II a or b. No phoneme appears both in stage I and II, though some phonemes appear as stage II counterparts to two or more stage I consonants. /ž/ is IIa to both /r/ and /g/ and IIb to /z/, for example; /c/ is IIb to /t/ and /k/, etc. On the basis of the foregoing, the following table may be constructed:

	labial	liquid	front	velar	
	p b f v m	w r n	s z t d st zd	k g x	Stage I
j	pj bj fj vj mj	l ž n (š)	ś ź ć ʒ́ śc źʒ	č ž š	a Stage
			š ž c ʒ šc žʒ	c ʒ ś	b II

In alternations of the above type, which I will term substitutive softening, each consonant alternates only with the consonant immediately above or below it on the table.[5] The utility of this classification lies in the fact that it provides an easy means of describing the various occurrences of substitutive softening which are extremely common in Polish morphology. The utility is increased by grouping certain consonants on stage I and assigning to them together with their stage II counterparts arbitrary designations (which I have based on the articulatory position of the stage I consonants). In general, consonants of these four groups show the same alternations, that is, if in a given morphological change one front consonant changes from stage I to IIb, the other front consonants will also change to IIb, whereas velars might well show a change to IIa.

A few examples will now be given showing the application of this classification to various morphological changes.

We observe the change which takes place in the base-final consonant between the locative singular and the remaining cases of nouns, using examples already given. The examples will be given in phonemic transcription, the nominative form first, then the locatives:

/mapa - mapje, baba - babje, šafa - šafje, trava - travje,
firma - firmje, škowa - škole, kara - kaže, žona - žońe,
kosa - koše, skaza - skaźe, zapwata - zapwaće, jazda - jeźźe,
renka - rence, noga - noʒe, muxa - muše/

On the basis of the above classification of substitutive softening, we may formulate the statement: Nouns having stage I consonants in base-final position before other case endings show, before the locative singular ending /e/, stage II consonants if the base-final consonant is labial or liquid, stage IIa if the base-final consonant is front or is /x/, and stage IIb if it is /k/ or /g/.

Let us consider another change, which occurs in the base-final consonant in the masculine personal nominative plural of adjectives. Below we give the masculine nominatives singular and the masculine personal nominative plural forms of a number of adjectives.

słaby /swaby/ słabi /swabi/ 'weak', tępy /tempy/ tępi /tempi/ 'dull', kulawy /kulavy/ kulawi /kulavi/ 'lame', znajomy /znajomy/ znajomi /znajomi/ 'acquaintance', stary /stary/ starzy /staži/ 'old', biały /bjawy/ biali /bjali/ 'white', pełny /pewny/ pełni /pewńi/ 'full', bogaty /bogaty/ bogaci /bogaći/, 'rich', chudy /xudy/ chudzi /xuʒi/ 'thin', bosy /bosy/ bosi /bośi/ 'barefoot', wielki /vjelk'i/ wielcy /vjelcy/

'great', ubogi /ubog'i/ ubodzy /ubo$_3$y/ 'poor', cichy /ćixy/ cisi /ćiśi/ 'quiet', pierwszy /pjerfšy/ pierwsi /pjerfśi/ 'first'.

We may formulate the statement: Adjectives having stage I base-final consonants before other case endings show, before the masculine personal nominative plural ending /i/ or /y/, stage I (no change) if the base-final consonant is labial, stage II if the base-final consonant is liquid, stage IIa if it is front, and stage IIb if it is velar. In addition, base final /š/ (stage IIb) changes to /ś/ (stage IIa).

Almost all non-automatic consonant changes in Polish are a variety of substitutive softening and are easily described in terms of the above frame of reference. Stage I consonants have traditionally been termed 'hard' in contrast to stage II consonants and /j/, which have traditionally been called 'soft'. This is a useful dichotomy, since only nouns with 'hard' stems (stems occurring with base-final stage I consonant in at least some cases other than nominative and accusative singular) show substitutive softening, and nouns with soft stems in some cases have different endings from those with hard stems. Thus:

chata /xata/ 'hut' o chacie /oxaće/ 'about a hut'

kawiarnia /kavjarńa/ 'cafe' o kawiarni /okavjarńi/ 'about a cafe'

wóz /vus/ 'wagon' o wozie /ovoźe/ 'about a wagon'

lokaj /lokaj/ 'lackey' o lokaju /olokaju/ 'about a lackey'

dyrektor /dyrektor/ 'director' dyrektorzy /dyrektožy/ 'directors'

tragarz /tragaš/ 'porter' tragarze /tragaže/ 'porters'

Effect of substitutive softening on clusters:

Except for /st zd/, which undergo softening as units, only the final consonant of a cluster undergoes substitutive softening. A consonant is affected by the substitutive softening of a consonant following it only insofar as the automatic morphophonemic principles of the language come into play. Thus:

izba /izba/ 'room, chamber' o izbie /o+izbje/ 'about the room'

bursa /bursa/ 'exchange' o bursie /oburśe/ 'about the exchange'

nafta /nafta/ 'petroleum' o nafcie /onafće/ 'about petroleum'

iskra /iskra/ 'spark' o iskrze /o+iskše/ 'about a spark'

Polska /polska/ 'Poland' o Polsce /opolsce/ 'about Poland'

ranga /ranga/ 'rank' o randze /oranʒe/ 'about rank'

panna /panna/ 'young lady' o pannie /opańńe/ 'about a young lady'

wiosna /vjosna/ 'spring' o wiosnie /ovjośńe/ 'about spring'

pasmo /pasmo/ 'bank, strip' o paśmie /opaśmje/ 'about a band'

1.5.1.2 Non-automatic consonant changes not resulting from substitutive softening.

1.5.1.2.1 Alternations involving nasal consonants.

/(n ∽ n) ∽ w̃/. The alternation appears in verbs of the e class with base-final nasals. Base-final /n/ or its stage II counterpart /ń/ appears in the present-stem forms, /w̃/ or its replacements (see 1.3.14 above) in the infinitive-stem forms. It also occurs in nouns like imię /imjew̃/ 'name', where /w̃/ occurs in the nominative and accusative singular, /ń/ in the remaining cases of the singular, and /n/ in the plural. Thus: zegnę /ze-gn-e-w̃/ 'I'll bend', zegniesz /ze-gń-e-š/ 'you'll bend' versus zgiąwszy /z-gjow̃-Ø-fsy/ 'having bent', zgiąć /z-gjoń-Ø-ć/ 'to bend', zgiął /z-gjo-Ø-w-Ø/ 'he bent', zgięty /z-gjen-Ø-t-y/ 'bent'. Also: imię /imjew̃-Ø/ 'name', imienia /imjeń-a/ 'of a name', imiona /imjon-a/ 'names'.

/(m ∽ mj) ∽ w̃/. This alternation also appears in verbs of the e class with base-final nasals. Base-final /m/ or its stage II counterpart /mj/ appears in the present-stem forms, /w̃/ or its replacements in the infinitive-stem form. Thus: zajmę /za-jm-e-w̃/ 'I'll occupy', zajmie /za-jmj-e-Ø/ 'he'll occupy' versus zająć /za-joń-Ø-ć/ 'to occupy', zająwszy /za-jow̃-Ø-fsy/

'having occupied', zajęła /za-je-Ø-w-a/ 'she occupied', zajęty /za-jen-Ø-t-y/ 'occupied'.

1.5.1.2.2 Alternations of consonant and zero.

/(t ∽ ć) ∽ Ø/. This alternation of /t/ and its stage IIa counterpart /ć/ with zero occurs in conjunction with and is conditioned by the alternation /(n ∽ ń) ∽ w̃/. /t/ occurs after /n/, /ć/ after /ń/ and zero after /w̃/. Thus: zwierzę /zvježe̊w̃-Ø/ 'animal', zwierzęcia /zvježe̊ńć-a/ 'of an animal', zwierzęta /zvježe̊nt-a/ 'animals'.

/d ∽ Ø/. This is an alternation of /d/ (or its stage II counterparts /ʒ́/ and /ʒ/)on the one hand and zero on the other. It occurs only in the bases of the verbs dać /dać/ 'to give', jeść /jeść/ 'to eat', and wiedzieć /vjeʒ́eć/ 'to know' and always occurs in conjunction with alternation of the preceding vowel with zero.

dadzą /daʒ-o-w̃/ 'they'll give' dać /d-a-ć/ 'to give' dam /d-a-m/ 'I'll give'

wiedzieć /vjeʒ́-e-ć/ 'to know' wiem /vj-e-m/ 'I know'

wiedzą /vjeʒ-o-w̃/ 'they know' wie /vj-e-Ø/ 'he knows'

jadła /jad-Ø-w-a/ 'she ate' jem /j-e-m/ 'I'm eating'

jedzą /jeʒ-o-w̃/ 'they're eating' je /j-e-Ø/ 'he's eating'

jedzony /jeʒ-o-n-y/ 'eaten'

It will be seen from the above examples that the third person plural present tense and all non-present-tense forms show /d/ (or its stage II alternants) preceded by a vowel. In present tense forms other than the third person plural both /d/ and the preceding vowel are replaced by zero in the verb base.

/ś ∽ Ø/. This alternation occurs only in the first and second person plural verbal ending morphemes.

jemy /j-e-my/ 'we're eating' jedliśmy /jed-Ø-l-i-śmy/ 'we were eating'

jecie /j-e-će/ 'you're eating' jedliście /jed-Ø-l-i-śće/ 'you were eating'

/k ∽ Ø/ and /g ∽ Ø/. These alternations appear in verbs of the e class with base-final /k/ and /g/. In the infinitive /k/ and /g/ are replaced by zero. In these verbs the infinitive formant also shows the allomorph /c/ (stage IIb) rather than /ć/ (stage IIa) which occurs otherwise.

piekła (pjek-Ø-w-a/ 'she baked' piec /pje-Ø-c/ 'to bake'

mogła /mog-Ø-w-a) 'she was able' móc /mu-Ø-c/ 'to be able'

/v ∽ Ø/. In the stem-extensions of certain verbs /v/ alternates with zero, /v/ appearing in the infinitive-stem forms and zero in the present-stem forms.

dawać /da-v-a-ć/ 'to give/ daje /da-je-Ø/ 'he's giving'

malować /mal-ov-a-ć/ 'to paint/ malujesz /mal-u-je-š̆/ 'you're painting'

zachowywać /za-xov-yv-a-ć/ 'to be keeping' zachowujesz /za-xov-u-je-š̆/ 'you're keeping'

1.5.1.2.3 Miscellaneous consonant alternations.

/t ∽ č̆/. This alternation occurs only in the verbs of the e/a class having base-final /t/, /t/ appearing in the infinitive-stem forms, and /č̆/ in the present-stem forms.

szeptać /šept-a-ć/ 'to whisper' szepcze /šepč̆-e-Ø/ 'he's whispering'

/t ∽ ś/ and /d ∽ ś/. This alternation occurs only in verbs of the e class with base-final /t/ or /d/. /t/ or /d/ are replaced by /ś/ in the infinitive.

wiodła /vjod-Ø-w-a/ 'she was leading' wieść /vjeś-Ø-ć/ 'to lead'

plotła /plot-Ø-w-a/ 'she was plaiting' pleść /pleś-Ø-ć/ 'to plait'

1.5.2 Vowel changes

1.5.2.1 Changes conditioned by phonemic environment.[6]

1.5.2.1.1 Change conditioned by preceding consonant.

/e ∽ o/[1]. This alternation does not occur between the forms of a single paradigm, but only between forms consituting separate paradigms. The consonant preceding /e/ is stage II and that preceding /o/ is stage I.[7]

ciec /ć́ec/ 'to flow' potok /potok/ 'stream'

ciekło /ć́ekwo/ 'it flowed'

rzekła /žekwa/ 'she said' wyrok /vyrok/ 'sentence'

czerwieńszy /červjeńšy/ 'redder' czerwony /červony/ 'red'

1.5.2.1.2 Changes conditioned by following consonant.

/e ∽ o/[2]. This alternation may occur between the forms of a single paradigm. The consonant preceding is always stage II. The consonant following /e/ is stage II and that following /o/ is stage I. The stage II consonant may either follow /e/ immediately or occur in a cluster following /e/.[8]

imienia /imjeńa/ 'of a name' imiona /imjona/ 'names'

wypieczeni /vypječeńi/ 'baked' (pl.) wypieczony /vypječony/ 'baked' (sg.)

cieśla /ć́eśla/ 'chisel' cios /ć́os/ 'blow'

/e ∽ a/. In this alternation, which may occur between the forms of a single paradigm, the vowel follows a stage II consonant or /j/. /a/ is followed by a stage I consonant, /e/ by stage II. The stage II consonant may either follow /e/ immediately or occur in a cluster following /e/.[9]

powiedzieć /povje$_{ʒ}$eć́/ 'to tell (perfective)' powiadać /povjadać́/ 'to tell (imperfective)'

jedzie /je$_{ʒ}$́e/ 'he rides' jadę /jadẽ̄/ 'I ride'

o jeździe /oje$_{ʒ}$́́e/ 'about a trip' jazda /jazda/ 'trip'

widzieli /vi$_{ʒ}$́eli/ 'they saw' widziała /vi$_{ʒ}$́awa/ 'she saw'

w lesie /vleśe/ 'in a forest' las /las/ 'forest'

o wietrze /ovječše/ 'about wind' wiatr /vjatr/ 'wind'

śmieli /śmjeli/ 'daring (plural)' śmiały /śmjawy/ 'daring (singular)'

dziedzic /ʒ́eʒ́ic/ 'heir, squire' dziadek /ʒ́adek/ 'grandfather'

siedli /śedli/ 'they sat' siadła /śadwa/ 'she sat'

Alternations of /e/ and /a/ before /r/. These alternations occur only between forms consituting separate paradigms.[10]

/(e ∽ a)r/[1]. In this alternation /a/ appears when the consonant following /r/ is stage I, /e/ when it is stage II. The consonant preceding the alternation is always stage II.

czernić /čerńić/ 'to blacken' czarny /čarny/ 'black'

/(e ∽ a)r/[2]. In this alternation, when /a/ appears, both the consonant preceding it and the consonant following /r/ are stage I. When /e/ appears, both the consonant preceding it and the consonant following /r/ are stage II.

śmierć /śmjerć/ 'death' martwy /martfy/ 'dead'

twierdzić /tfjerʒ́ić/ 'to affirm/ twardy /tfardy/ 'hard'

1.5.2.1.3 Changes conditioned by syllabic structure. These changes may occur between forms consituting a single paradigm.

/o ∽ u/[1]. /o/ appears in open syllables, /u/ in closed syllables, when the alternation appears within a paradigm. When the alternation appears between forms constituting separate paradigms, both /o/ and /u/ may appear in either open or closed syllables. This alternation occurs principally in morphemes where the final consonant is voiced in some allomorph. It occurs only in a relatively small number of morphemes where the final consonant is always voiceless or is a nasal. When this alternation occurs, the traditional orthography uses the character ó to write /u/.[11]

stół /stuw/ 'table' stołu /stowu/ 'of a table'

róg /ruk/ 'corner, horn' rogu /rogu/ 'of a corner'

sól /sul/ 'salt' soli /soli/ 'of salt'

dróg /druk/ 'of roads' droga /droga/ 'road'

pól /pul/ 'of fields' pole /pole/ 'field'

pólko /pulko/ 'little field'

robót /robut/ 'of works' robota /robota/ 'work'

robótka /robutka/ 'little job'

gotów /gotuf/ 'ready' gotowy /gotovy/ 'ready'

pomóc /pomuc/ 'to help' pomogę /pomogẽw̃/ 'I'll help'

pomógł /pomuk/ 'he helped' pomogła /pomogwa/ 'she helped'

pomógłszy /pomukšy/ 'having helped'

pomóż /pomuš/ 'help!' pomoże /pomože/ 'he'll help'

pomóżcie /pomuśće/ 'help!'

zrób /zrup/ 'do...!' zrobić /zrobić/ 'to make, do'

zróbmy /zrubmy/ 'let's do...!'

/(e ⌣ o)w̃/[1]. In this alternation the vowel is followed by a nasal phoneme, namely /w̃/ or its replacements. That is, /w̃/ appears before all fricatives, except palatal fricatives, /j̃/ before palatal fricatives, /m/ before labial stops, /ń/ before palatal stops and affricates, and /n/ before dental, retracted, and velar stops and affricates. /w̃/ is lost in non-deliberate speech before /l/ and /w/. When this variation appears within a paradigm, /e/ occurs when the following /w̃/ or its replacement is followed by consonant plus vowel, while /o/ occurs if the /w̃/ is followed by word-boundary or by consonant plus consonant or word-boundary.[12]

zgiąć /zg'ońć/ 'to bend' zgięcie /g'eńće/ 'bending'

zgiąwszy /zg'owfsy/ 'having bent' zgięty /zg'enty/ 'bent'

zgiął /zg'oW̃/ 'he bent' zgięła /zg'eW̃wa/ 'she bent'

(deliberate speech style)

rąk /ronk/ 'of hands' ręka /renka/ 'hand, arm'

rączka /rončka/ 'little hand'

jagniąt /jagńont/ 'of lambs' jagnięta /jagńenta/ 'lambs'

jagniątko /jagńontko/ 'little lamb'

ząb /zomp/ 'tooth' zęba /zemba/ 'of a tooth'

święto /śfjento/ 'holiday' świąt /śfjont/ 'of holidays'

mąż /moW̃š/ 'husband' męża /meW̃ža/ 'of a husband'

świąt /śfjont/ 'of holidays' święto /śfjento/ 'holiday'

1.5.2.1.4 Change conditioned by vowel in following syllable.

/(e ∽ o)W̃/[2]. In this alternation /e/ occurs when there is /i/ or /y/ in the following syllable. /o/ occurs otherwise.

pieniądze /pjeńonʒe/ 'money' pieniędzy /pjeńenʒy/ 'of money'

pieniędzmi /pjeńenʒmi/ 'with money'

miesiąc /mjeśonc/ 'month' miesięcy /mjeśency/ 'months'

1.5.2.1.5 Alternation of vowels with zero. All these alternations may occur between forms constituting a single paradigm.

/e ∽ Ø/[1]. Movable /e/ without substitutive softening.

Morphemes frequently occur having one allomorph consisting of or terminating in a consonant cluster, which allomorph appears before vowels, and another allomorph containing /e/ before the final consonant, which latter allomorph appears before a consonant or before word-boundary. In addition, certain suffixes have one allomorph consisting of one or more consonants, which appears when the suffix is followed by a vowel and another allomorph consisting of an /e/ followed by these consonants when the suffix is followed by word-boundary or by a consonant. Further, all prefixes and

prepositions which have an allomorph terminating in a consonant (prefixes and prepositions with but one allomorph all terminate in vowels) also have an allomorph with an added /e/. In the case of prefixes, the allomorph terminating in /e/ is used before bases beginning with consonant clusters. In the case of prepositions, the allomorph with /e/ is used before bases beginning with a limited number of clusters, which must be listed separately for each preposition. I refer to this /e/ which alternates with zero as 'movable e'. Its occurrence frequently prevents the formation of consonant clusters incompatible with the Polish phonological system.[13]

The phonemes /k/ and /g/ are replaced by /k'/ and /g'/ respectively before 'movable e'. Examples:

dziadka /ʒ́atka/ 'of grandfather' dziadek /ʒ́adek/ 'grandfather'

córka /curka/ 'daughter' córek /curek/ 'of daughters'

bocca /bocca/ 'of a push' bodziec /boʒ́ec/ 'push'

ciotka /ć́otka/ 'aunt' ciotek /ć́otek/ 'of aunts'

cioteczna /ć́otečna/ 'pertaining to one's aunt'

kufra /kufra/ 'of a trunk' kufer /kufer/ 'trunk'

łba /wba/ 'of a head' łeb /wep/ 'head (of an animal)'

pełny /pewny/ 'full' pełen /pewen/ 'full'

jedno /jedno/ 'one' jeden /jeden/ 'one'

rozdarł /rozdar/ 'he tore up' rozedrze /rozedže/ 'he'll tear up'

w Anglii /vanglji/ 'in England' we Francji /vefrancji/ 'in France'

okno /okno/ 'window' okien /ok'en/ 'of windows'

ognia /ogńa/ 'of fire' ogień /og'eń/ 'fire'

This alternation also occurs not conditioned by the above-stated phonological factors when /e/ occurs as a base-extension in the present-stem forms of certain verbs:

dolać /do-l-a-ć/ 'to add by pouring' dolejesz /do-le-je-š/ 'you'll add by pouring'

/e ∽ ∅/[2]. Movable /e/ with substitutive softening.

In the examples given above there was no change in the consonants preceding movable /e/, except those occasioned by general morphophonemic principles. In many cases where movable /e/ occurs (never however in a prefix or preposition) it may be accompanied by substitutive softening, the consonant preceding /e/ being stage II when /e/ is present and stage I when it is not.

dnia /dńa/ 'of a day' dzien /ʒeń/ 'day'

chłopca /xwopca/ 'of a boy' chłopiec /xwopjec/ 'boy'

wsi /fśi/ 'of a village' wieś /vjeś/ 'village'

dworca /dvorcu/ 'of a station' dworzec /dvožec/ 'railroad station'

ojca /ojca/ 'of father' ojciec /ojćec/ 'father'

This alternation may also occur in verb roots, in which case occurrence of /e/ is not conditioned by the position of the morpheme before consonant or word-boundary. Rather, it occurs interparadigmatically or between present and infinitive stems. Thus:

słać /swać/ pościelić /pośćelić/ 'to make a bed' (root: /sw ∽ scel/)

rzezać /žezać/ 'to butcher, circumcise' rżnąć /ržnońć/ 'to cut'

/o ∽ ∅/[1]. Movable /o/ with substitutive softening. Movable /o/ occurs in the same phonemic environments as movable /e/, but does not occur in prefixes, suffixes, or prepositions. It occurs much more rarely than movable /e/. The consonant before /o/ is always stage II, being stage I when /o/ is absent.

kotła /kotwa/ 'of a kettle' kocioł /koćow/ 'kettle'

kozła /kozwa/ 'of a goat' kozioł /kożow/ 'goat'

/a∽Ø/. This alternation takes place before /r/ or its stage II alternate /ž/. /a/ appears when the /r/ is followed by a consonant or is word-final. Zero appears when the /r/ is followed by a vowel. This alternation occurs mainly in verbs of the e class with base-final /r/.

dr̨ę /drew̨/ 'I'm tearing' darł /dar/ 'he was tearing'

drze /dže/ 'he's tearing' darła /darwa/ 'she was tearing'

drzeć /dżeć/ 'to tear' darty /darty/ 'torn'

marznąć /marznoń̨ć/ 'to freeze' mróz /mrus/ 'frost'

mrozu /mrozu/ 'of frost'

In the root of /marz- mroz- mruz-/ there is a parallel alternation /o∽Ø/[2], which latter is combined with /o∽u/[1].

1.5.2.2 Vowel changes not conditioned by phonemic environment.

1.5.2.2.1 Alternations of vowel with zero. The first two alternations appear in verb roots, /i/ or /y/ appearing when the root is actualized as the base of an iterative or prefixed imperfective verb and being absent when the root is actualized as the base of an unprefixed imperfective or prefixed perfective verb.

/i∽Ø/.

zapominać /za-po-min-a-ć/ zapomnieć /za-po-mń-e-ć/ 'to forget'

/y∽Ø/.

połykać /po-wyk-a-c/ połknąć /po-wk-noń-Ø-ć/ 'to swallow'

/o∽Ø/[2]. /o/ appears as a base-extension in the present-stem forms of the verbs stać 'to stand' and bać się 'to fear'.

stać /st-a-ć/ 'to stand' stojisz /sto-ji-š/ 'you're standing'

1.5.2.2.2 Alternations of /u/ with /o/ and /y/. These alternations occur mainly in the verbal stem-suffixes u/ov and u/yv, where they are conditioned by the alternation /v∽Ø/ (see above 1.5.1.2.2), /o/ and /y/ appearing with /v/ and /u/ with zero.

/o⌣u/[2].

malować /mal-ov-a-ć/ 'to paint' malujesz /mal-u-je-š/ 'you're painting'

/o⌣y/.

zachowywać /za-xov-yv-a-ć/ 'to be keeping' zachowujesz /za-xov-u-je-š/ 'you're keeping'

1.5.2.2.3 /o⌣a/. This alternation appears between the bases of perfective verbs and their imperfective counterparts, /o/ appearing in perfective, /a/ in imperfective verbs.

zwolnić /zvoln-i-ć/ zwalniać /zvaln-a-ć/ 'to free'

1.5.2.5 Combinations of special vowel changes.

Below, we list combinations of vowel changes which occur in Polish. It is not an exhaustive list of all occurring combinations, but it lists the most common ones.

/e⌣(o⌣u)/[1]. /e⌣o/[1] is the principal alternation with /o⌣u/[1] subordinate on the /o/ side.

leżeć /ležeć/ 'to be lying' łoże /wože/ 'bed'

lec /lec/ 'to lie down' łóżko /wuško/ 'bed'

legło /legwo/ 'it lay down'

/e⌣(o⌣u)/[2]. /e⌣o/[2] is the principal alternation with /o⌣u/[1] subordinate.

ziele /źele/ 'greens' zioło /źowo/ 'herb'

ziół /źuw/ 'of herbs'

w kościele /fkośćele/ 'in church' kościoła /kośćowa/ 'of church'

kościół /kośćuw/ 'church'

brzezina /bžeźina/ 'birch grove' brzoza /bžoza/ 'birch'

brzóz /bžus/ 'of birches'

sielski /śelski/ 'pertaining to a hamlet' sioło /śowo/ 'hamlet'

siół /śuw/ 'of hamlets'

wiedli /vjedli/ 'they led' wiodła /vjodwa/ 'she led'

wiódł /vjut/ 'he led'

In one stem /vesel/ the consonant preceding /e/ is stage I instead of II:

weseli /veseli/, wesoły /vesowy/, wesół /vesuw/ 'gay, happy'

/((e ⌣ o) ⌣ (o ⌣ u)) ⌣ Ø/. This alternation represents a combination of /e ⌣ Ø/[1] as principal alternation and /e ⌣ o/[1] subordinate to it. Subordinate to the latter are /e ⌣ o/[2] and /o ⌣ u/[1]. We may take as an example the verb root /br bjer bjor bjur bor bur/ in the following verb forms: brać /brać/ 'to take', bierze /bježe/ 'he's taking', rozbierać /rozbjerać/ 'to disassemble', biorę /bjorẽw/ 'I'm taking', rozbiór /rozbjur/ 'partition (of Poland)', wybór /vybur/ 'selection', wyboru /vyboru/ 'of a selection'.

/(e ⌣ (o ⌣ u)) ⌣ o/. This alternation represents a combination of /e ⌣ o/[1] and /e ⌣ o/[2], /e ⌣ o/[2] also being combined with /o ⌣ u/[1]. Example: The verb root /ńes ńos ńus nos/ in nieść /ńeść/ 'to carry', nieśli /ńeśli/ 'they carried', niesie /ńeśe/ 'he's carrying', niosę /ńosẽw/ 'I'm carrying', niosła /ńoswa/ 'she carried', niósł /ńus/ 'he carried', nosić /nośić/ 'to carry (repetitive)'.

/(e ⌣ (o ⌣ u)) ⌣ (o ⌣ u)/. This alternation represents a combination of /e ⌣ o/[1] and /e ⌣ o/[2] each combined with /o ⌣ u/[1]. Examples: The verb root /vjez vjoz vjuz voz vuz/ in wieźć /vješć/ 'to haul, convey, carry by vehicle', wiezie /vješe/ 'he's hauling', wiozę /vjozẽw/ 'I'm hauling', wiozła /vjozwa/ 'she hauled', wozić /vośić/ 'to haul (repetitive)', wozu /vozu/ 'of a wagon or vehicle', wóz /vus/ 'wagon, vehicle'.

/(e ⌣ (o ⌣ u)) ⌣ a/. This alternation represents a combination of /e ⌣ o/[2], /o ⌣ u/[1], and /e ⌣ a/. Examples: The root /gńet gńot gńut gńat/

in the verb wygnieść /vygńeść/ 'to press out' wygniecie /vygńeće/ 'he'll press out', wygniotę /vygńotew/ 'I'll press out', wygniotło /vygńotwo/ 'it pressed out', wygniótł /vygńut/ 'he pressed out', wygniatać /vygńatać/ 'to press out (imperfective)'.

/(o ∽ u) ∽ a/. This alternation represents a combination of /o ∽ u/[1] and /o ∽ a/. Examples: The root /mog mug mag/ in pomogę /pomogew̃/ 'I'll help', pomoże /pomože/ 'he'll help', pomogła /pomogwa/ 'she helped', pomógł /pomuk/ 'he helped', pomóc /pomuc/ 'to help (perfective)', pomagać /pomagać/ 'to help (imperfective)'. The root /mov muv mav/ in mowa /mova/ 'speech', mówić /muvić/ 'to speak', mawiać /mavjać/ 'to speak (repetitive)'.

/u ∽ (y ∽ (e ∽ ∅))/. This alternation represents a combination of the alternations /u ∽ y/, /y ∽ ∅/, and /e ∽ ∅/[1]. Example: The root /tx dex dyx dux/ in the words tchu /txu/ 'of breath', dech /dex/ 'breath', zdechnąć /zdexnońć/ and zdychać /zdyxać/ 'to breathe', duch /dux/ 'spirit', dusza /duša/ 'soul'.

Footnotes

[1] A word is defined as a syntactic element consisting of one or more morphemes, which may occur freely in the environment of syntactic elements of various kinds, but none of whose constituents may occur except in conjunction with other elements of the same morphological category as those with which it occurs within the word. (This definition is understood to apply only to the word in Polish.) Thus, in the word żona /ž̇on-a/ 'wife' the ending /a/ does not occur except in conjunction with noun (and adjective) stems, as in kobieta /kobjet-a/ 'woman', raczka /ronč-k-a/ 'little hand', etc., while the base /ž̇on-/ occurs only in conjunction with suffixes and inflectional elements as in /ž̇on-y/ 'of a wife', /ž̇oń-e/ 'to a wife', /ž̇on-Ø/ 'of wives', /ž̇eń-sk-i/ 'feminine', etc. Enclitics such as /mi/ 'to me', /(e)m/ 'am', proclitics such as /w(e)/ 'in' are words, since they occur freely in the utterance with elements of various syntactic classes. Thus, /(e)m/ occurs in such diverse environments as kochałem /kox-a-w-Ø-em/ 'I loved (man speaking)', kochałam /kox-a-w-a-m/ 'I loved (woman speaking)', ciekawym /ćekav-y-m/ 'I'm interested (man speaking)', abym /a-by-m/ 'so that I would ...'.

Words may in turn be divided into clitics (en- and proclitics) and non-clitics (independent words). The vast majority of Polish words are non-clitic. Non-clitics have lexical stress, usually on the penultimate syllable. They can occur as minimal free utterances and when occurring within an utterance are marked by the possibility of occurrence of some form of transition other than close transition at their boundaries. Clitic elements have no stress of their own, but form one stress unit with the word they precede or follow. Some words, such as nie /ńe/ 'no!, not'

function sometimes as non-clitics (Nie! /^{3}ńe^{1}/ 'No.'), sometimes as clitics (nie robimy /^{2}ńerob'imy^{1}/ 'we're not making'). Compound words are clusters of two or more words functioning morphologically (not just syntactically) as one word, i.e. having one set of inflexional elements serving both stems. Compound words may have more than one lexical stress and may have open transition within their bounds.

2 Prefixation is the occurrence of any of a limited number of morphemes (less than twenty) before the word-base. More than one prefix may occur in a word. It is difficult to define the morphological-syntactic status of prefixes. Most of them occur as separate words (usually prepositions) also. It is symptomatic that open transition may occur between a prefix and a base. Compare the prefixed verb wjeździć /v+jeźźić/ 'to drive in' with the unprefixed word więzień /vjẽjźeń/'prisoner'. I am inclined to regard words containing prefixes as a sub-category of compound words.

3 There are, of course, items which have basic palato-velar before /e/ plus nasal plus consonant (cf. zgięty /zg'enty/); here, of course, there is no alternation.

4 In this paper, when I refer to verb types and the breakdown of the verb into various kinds of constituents such as prefix, base, stem-suffix, thematic vowel, formant, and ending, the classification and division is according to the analysis of the Polish verb morphology given below in this work.

5 The term substitutive softening is, of course, not original with me, but has been used by Slavicists previously.

6 It must be understood that the non-automatic sound changes listed below as being determined or partially determined by phonemic environment do not always occur when the requisite environment is present (if they did,

they would be, of course, automatic sound changes). Very frequently, a whole paradigm will show but one allomorph of a given morpheme, while other paradigms containing the same morpheme may show another allomorph or both the first allomorph and another allomorph or allomorphs. However, when such a special morphophonemic change occurs between forms of a single paradigm, the alternant chosen is determined by the phonemic environment. When a single paradigm shows but one alternant, the alternant occurring in the paradigm is usually that required by the phonemic environment of the majority of the forms or of the statistically most frequent forms. Historically, this situation is the result of analogical levelling within the paradigm (Paradigmenzwang). Thus, the adjective biały /bjaw-y/ 'white' retains the vowel /a/ before the base final /l/ of the nominative plural masculine personal form biali /bjal-i/, though /e/ would be expected here (see point 1.5.2.1.2). The comparative forms bielszy /bjelšy/ etc. show the /e/ conditioned by the phonemic environment.

7 Those concerned with the historical development of Slavic will, of course, recognize this alternation as the reflex of Indo-European ablaut variation between e and o grades, the substitutive softening resulting from the originally allophonic palatalization in proto-Slavic.

8 Slavicists will, of course, recognize this as a result of the Polish development whereby common Slavic /e/ before certain unpalatalized consonants resulted in Polish /o/ while giving Polish /e/ in other positions.

9 This is the result of the Polish development whereby common Slavic /e/ before certain unpalatalized consonants resulted in /a/ and before palatalized consonants in /e/, a development paralleling that described in footnote 8.

10 The alternation takes place only when /r/ is followed by the consonants /t d s z n/.

11 This results from the fact that early Polish long /o/ of no matter what origin fell together with /u/. In Old Polish /o/ was regularly lengthened in closed syllables before certain voiced consonants.

12 This, of course, is the result of the change whereby a quantitative change in the Old Polish nasal vowel resulted in two qualitatively different nasal diphthongs /ew̃/ and /ow̃/, the former resulting from the short nasal and the latter from the long nasal. The nasal vowel underwent lengthening in closed syllables under conditions similar to those under which /o/ was lengthened in Old Polish.

13 Stankiewicz states that movable /e/ only occurs before the consonants /n v n ń r l w k g c ć/ in bases containing a vowel other than the movable /e/.

II

2.0 NOMINAL INFLECTION

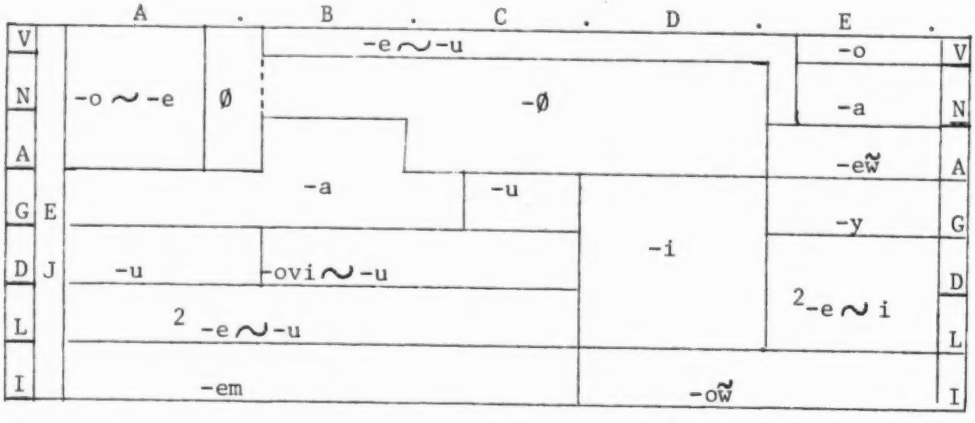
Nominals in Polish include substantives, adjectives, pronouns, and numerals. The nominal inflectional system distinguishes up to seven cases (V N A G D L I)--though no one nominal will show a different ending for each of the cases, and two numbers (singular and plural). In the singular the genders masculine, neuter and feminine are distinguished; within the masculine the distinctions animate vs. inanimate are relevant in the singular. In the plural the gender distinctions are (masculine) personal vs. non-personal. All nominals consist of the stem plus an ending. The stem will contain a root and optionally prefixes and suffixes. Inflection is accomplished by the alternation of endings with possible accompanying changes in the stem.

2.1 SUBSTANTIVES

Substantives may be divided into five inflectional types. Type A includes all neuter substantives. B includes all masculine substantives in which the A and G cases have a common ending. These are primarily masculine substantives denoting persons. Type C includes all masculine substantives in which the N and A cases share the same ending. These are primarily masculine substantives which do not denote animate beings. Type D includes all feminine substantives in which N and A sg. share the same ending. Type E includes all feminine substantives in which the N and A cases have different endings in the singular. There are also substantives with singular of one type and plural of another. Of such mixed types, the one containing the most substantives is perhaps BC (singular of type B, plural of type C) including primarily masculine substantives denoting animate

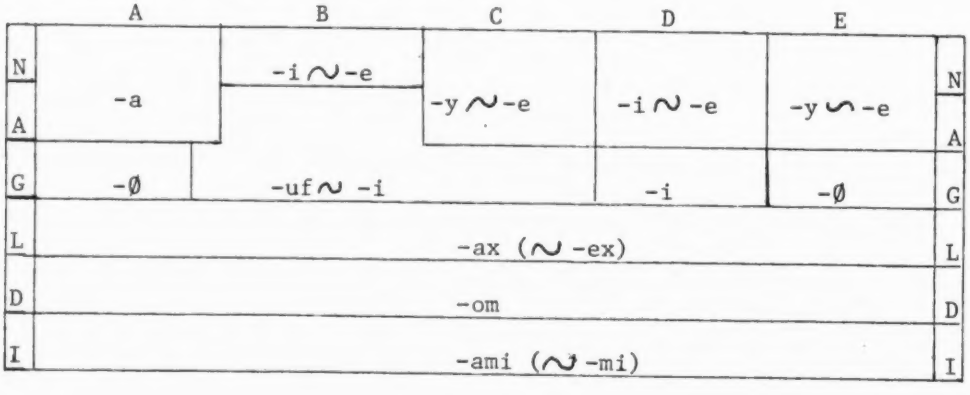
beings which are not persons, e.g. animals, but also "expressive" (affective) variants of B nouns, carrying derogatory connotation. EB type also contains a fair number of substantives. The remaining mixed types contain but a few substantives each. Four masculine substantives show mixed substantive-adjectival declensional type: sędzia 'judge', hrabia 'court', margrabia 'margrave' and burgrabia 'burgrave' have E type endings in the singular, except for AGD and alternate L, which have adjective endings, while the plural has B type endings. Alternate endings of adjective type are also admitted in the AGD sg. Substantives show the following endings:

Singular



Ex. miasto syn sklep kość żona

Plural



In the plural the V ending is identical with the N. Wherever the endings are indicated as -i or -y in the above table (or in the remarks that follow), it is understood that /i/ is replaced by /y/ and vice versa, if the stem ends in a C which cannot precede /i/ or /y/ as the case may be.

2.1.1 Remarks on the endings.

In the V sg., B and C type substantives show -u after most soft stems and also after a number of hard stems, in particular those ending in velars. Remaining hard stems have in the B and C types -e (with stem-final C change). The E type has -o except for nicknames with soft stems, which have -u (Haniu).

Zero occurs in N and A sg. of C and D type substantives, in N of B type substantives (except for a very few masculine nicknames with -o or -u), and in V, N, and A of the few A type substantives whose stems terminate in the suffixes -ew̃/en- or -ew̃/ent-.

The remaining A type substantives with hard stems show -o in the V, N, and A sg., and those with soft stems -e.

A very few E type substantives show -i in the V and N sg. One of these (pani 'lady') has -ow̃ in the A sg. A few EB substantives, personal names, have -o in the N sg. The remaining E type substantives have -a in the N sg. and -ew̃ in the A sg.

All A, all B, and some C substantives have -a in the G sg. and B substantives have this ending in the A sg. as well.

E substantives have -y in the G sg.

Most C substantives show -u in the G sg., though a very large number have -a. Almost all A and a good number of D and C substantives show -u in the D sg. A majority of D and C type substantives and a very few A type substantives show -ovi in the D sg. In the B and C type -u is confined

mostly to monosyllabic stems (pan) and place names endings in -ov- (Kraków, ku Krakowu).

D type substantives show -i in the V, G, D, and L sg.

In the L sg. A, B, and C substantives show -u after soft stems, stems endings in velars, and a very few others. In the remaining stems ending in hard C they show -e (with stem-final C variation).

E type substantives show -e (with stem-final C variation) after hard stems and -i after soft stems in D and L sg.

In the I sg. A, B, and C type substantives show -em (before which /k g → k' g'/), while D and E substantives show -oũ.

Some A substantives (all Latin borrowings) have the ending -um in all cases of the singular. In the G pl., these substantives show -uf or -i.

In the N and A pl. C and E substantives show -e after soft stems, -y after hard stems.

In the N and A pl. most D type substantives show -i and a fair number -e. All D substantives show -i in the G pl.

In the N and A pl. A type substantives show -a.

In the N pl. B type substantives show -e after soft stems, -i (with stem-final C change) after hard stems. The B substantives brat 'brother' and ksiądz 'priest' have -a in the N pl. B-type substantives have A pl. identical with G.

In the G pl. most A and E type substantives and a few B-type substantives (e.g. most with stem suffix -an(in-) show zero. C type substantives, almost all B, and a few A substantives (including all A substantives, with -um in the singular or with the suffix -isk-) show -uf or -i in the G pl. The ending -i occurs only after soft stems, while -uf occurs after all hard

stems and some soft stems. All C and a few E type substantives (mainly most of those with stems ending in /ń/ or Cj) show -i in the G pl.

All substantives show -ax and -om in the L and D pl. except for a few E-type pluralia tantum denoting countries (Włochy 'Italy', which have -ex in the L pl. we Włoszech 'in Italy'). In the I pl. all substantives show -ami, except for a few substantives of B, C, and D types which show -mi. One A substantive (państwo) when used in the meaning 'you' has the ending -a in the A sg. The two AD substantives (oko 'eye' and ucho 'ear') have the ending -y in the N and A pl. (with stem-final C change), -u in the G pl., and -yma or -ami in the I pl. The D substantive ręka 'hand' has alternate endings (beside the usual ones) -u in the L sg. and -oma in the I pl. In the NA pl. it has -e with change of stem final /k → c/.

It should be kept in mind that when in a given case there is a possible choice between two or more endings there is considerable individual and stylistic variation in assigning a given ending to any particular stem. Thus in C type substantives there is fluctuation in many cases between the use of -u or -a in the G sg. and in B type between -ovi and -u in the D sg. etc. Sometimes alternate endings may differentiate different meanings of the same word. Thus G pl. pokojów 'peace treaty', pokoi 'room'.

Stem changes in substantives.

2.1.2 Stem-final consonant changes (substitutive softening):

(1) Before -e in the V sg. of B and C type substantives the following changes take place:

b → bj p → pj m → mj v → vj f → fj r → ž n → ń

w → l (stage I to II)

s → ś z → ź t → ć d → ʒ́ k → č g → ž x → š

(stage I → IIa) c → č (stage IIb → IIa).

(2) Before -e in the L sg. of A, B, and C substantives and in the L and D sg. of E substantives the following changes take place:

b→bj p→pj m→mj v→vj f→fj r→ř

n→ń w→l (stage I to II): s→ś z→ź t→ć

d→ʒ́ x→š (stage I to IIa); k→c g→ʒ (stage I to IIb).

(3) Before -i in the N pl. of B substantives the following changes take place:

r→ř w→l n→ń (stage I to II) s→ś z→ź

t→ć d→ʒ́ (stage I to IIa) k→c g→ʒ x→ś (stage I to IIb).

(4) The E substantive reka 'arm' has ręce in the N and A pl. (stage I to IIb). The A substantives oko 'eye' and ucho 'ear' and the B substantives brat 'brother' have in the plural the stem variants oč-, uš-, and brać- respectively (stage I to IIa).

(5) The B substantives przyjaciel 'friend' has stem-final /w/ in plural forms other than N (stage II to I). Alternate (substandard) forms exist with /l/ throughout.

(6) The suffixes -w̃/n- and -w̃/nt- which occur in A nouns show stage II (-ń- and -ńć-) in the D, L, and I sg. and stage I (-n- and -nt-) in the plural.

(7) The suffix -an- shows -ańin- in the singular (stage II with extension), usually -ań- (stage II) in the N pl. with the ending -e regular after soft stems, and -an- (stage I) in the remaining cases of the plural. Nouns with this suffix usually have the ending -Ø in the G pl., though they may have -uf. Those with -uf in G pl. usually retain -an- in the N pl. which then changes automatically to -ań- upon addition of ending -i.

2.1.3 Addition to or loss of part of the stem (stem extension or truncation).

(1) Addition of -in- to the suffix -an- mentioned in (7) preceding.

(2) Very many B substantives show the stem extension -ovj- in the N plural, as do a number of the EB type.

(3) Numerical collectives (which are grammatically substantives, not numerals) such as dwoje 'group of two' siedmioro 'group of seven' etc. (G sg. dwojga, siedmiorga, etc.) lose their stem-final /g/ in N and A sg.

(4) The AB substantive dziecko 'child' loses stem-final /k/ and changes /c/ to /ć/ (stage IIb to IIa) in the plural.

(5) The C substantive tydzień 'week' (cases other than N and A sg. have the stem tygodń-) loses the element /go/ in the N and A sg. (and inserts moveable e with substantive softening of the preceding C).

2.1.4 Moveable vowels (alternation of vowel with zero).

(1) Moveable e ($e \sim \emptyset^1$). Many substantives, whose stems end in two or more consonants insert an /e/ before the last consonant of the stem when the stem is followed by a zero ending. If the consonant preceding the inserted /e/ is /k/ or /g/, /kg → k' g'/.

(2) Moveable e with substitutive softening of the preceding consonant ($e \sim \emptyset^2$). Some substantives with moveable e change a stage I consonant preceding moveable e to stage II (IIa).

(3) Moveable o occurs in a very few substantives under the same conditions as moveable e. It is always preceded by substitutive softening.

2.1.5 Stem vowel alternation. The vowel of the final syllable of a substantive stem will often show some alternation.

(1) $o \sim u^1$. Stem vowel /o/ changes to /u/ (written ó) before zero endings.

(2) $(e \sim o)\tilde{w}^1$. Stem vowel /e/ followed by a nasal (written ę) changes to /o/ plus nasal (written ą) before zero endings.

(3) (e ~ o)$^{\nu 2}_{w}$. Stem vowel /o/ plus nasal changes to /e/ plus nasal before an ending containing /i/ or /y/.

(4) e ~ a. Stem vowel /a/ followed by hard consonant changes to /e/ when the following consonant is softened (as before the ending -e in L sg.).

(5) e ~ o^2. Stem vowel /o/ followed by hard consonant changes to /e/ when the following consonant is softened.

(6) e ~ (o ~ u)^2. Stem vowel /e/ alternates with /o/ and /u/, /u/ occurring before zero endings and /e/ when the following consonant is softened. This is a combination of 1) and 5) above.

2.1.6 Example paradigms

A type

	'town, city' (e ~ a)	'sea' (o ~ u)	'name' (e ~ o^2)	'animal' (e ~ o)w^1	'two' (coll.)
Sg.					
V.	miasto	morze	imię	zwierzę	dwoje
N.	miasto	morze	imię	zwierzę	dwoje
A.	miasto	morze	imię	zwierzę	dwoje
G.	miasta	morza	imienia	zwierzęcia	dwojga
D.	miastu	morzu	imieniu	zwierzęciu	dwojgu
L.	mieście	morzu	imieniu	zwierzęciu	dwojgu
I.	miastem	morzem	imieniem	zwierzęciem	dwojgiem
Pl.					
N.	miasta	morza	imiona	zwierzęta	
A.	miasta	morza	imiona	zwierzęta	
G.	miast	mórz	imion	zwierząt	
D.	miastom	morzom	imionom	zwierzętom	
L.	miastach	morzach	imionach	zwierzętach	
I.	miastami	morzami	imionami	zwierzętami	

B type

	'son'	'boy'	'brother'	'neighbor' (e ~ a)
Sg.				
V.	synu!	chłopcze!	bracie!	sąsiedzie!
N.	syn	chłopiec	brat	sąsiad
A.	syna	chłopca	brata	sąsiada
G.	syna	chłopca	brata	sąsiada
D.	synowi	chłopcu	bratu	sąsiadowi
L.	synu	chłopcu	bracie	sąsiedzie
I.	synem	chłopcem	bratem	sąsiadem

Pl.				
N.	synowie	chłopcy	bracia	sąsiedzi
A.	synów	chłopców	braci	sąsiadów
G.	synów	chłopców	braci	sąsiadów
D.	synom	chłopcom	braciom	sąsiadom
L.	synach	chłopcach	braciach	sąsiadach
I.	synami	chłopcami	braćmi	sąsiadami

	'uncle' (dem.)	'Casimir' (dem.)	'Thaddeus' (dem.)
Sg.			
V.	wujciu!	Kaziu/Kazio!	Tadziu/Tadzio!
N.	wujcio	Kazio	Tadzio/Tadziu
A.	wujcia	Kazia	Tadzia
G.	wujcia	Kazia	Tadzia
D.	wujciowi	Kaziowi	Tadziowi
L.	wujciu	Kaziu	Tadziu
I.	wujciem	Kaziem	Tadziem
Pl.			
N.	wujciowie	Kaziowie	Tadziowie
A.	wujciów	Kaziów	Tadziów
G.	wujciów	Kaziów	Tadziów
D.	wujciom	Kaziom	Tadziom
L.	wujciach	Kaziach	Tadziach
I.	wujciami	Kaziami	Tadziami

	B type			C type
	'friend' $e \sim (o \sim u)^2$	'Russian' (-an-)	'money' $(e \sim o)\tilde{w}^2$	'church' $e \sim (o \sim u)^2$
Sg.				
V.	przyjacielu!	Rosjaninie!	pieniądzu!	kościele!
N.	przyjaciel	Rosjanin	pieniądz	kościół
A.	przyjaciela	Rosjanina	pieniądz	kościół
G.	przyjaciela	Rosjanina	pieniądza	kościoła
D.	przyjacielowi	Rosjaninowi	pieniądzowi	kościołowi
L.	przyjacielu	Rosjaninie	pieniądzu	kościele
I.	przyjacielem	Rosjaninem	pieniądzem	kościołem
Pl.				
N.	przyjaciele	Rosjanie	pieniądze	kościoły
A.	przyjaciół	Rosjan	pieniądze	kościoły
G.	przyjaciół	Rosjan	pieniędzy	kościołów
D.	przyjaciołom	Rosjanom	pieniądzom	kościołom
L.	przyjaciołach	Rosjanach	pieniądzach	kościołach
I.	przyjaciółmi	Rosjanami	pieniędzmi	kościołami

C type

	'store'	'room, peace' (o u)	'luggage' (moveable e[1])	'penny'
Sg.				
V.	sklepie!	pokoju!	kufrze!	groszu!
N.	sklep	pokój	kufer	grosz
A.	sklep	pokój	kufer	grosz
G.	sklepu	pokoju	kufra	grosza
D.	sklepowi	pokojowi	kufrowi	groszowi
L.	sklepie	pokoju	kufrze	groszu
I.	sklepem	pokojem	kufrem	groszem
Pl.				
N.	sklepy	pokoje	kufry	grosze
A.	sklepy	pokoje	kufry	grosze
G.	sklepów	pokojów/pokoi	kufrów	groszy
D.	sklepom	pokojom	kufrom	groszom
L.	sklepach	pokojach	kufrach	groszach
I.	sklepami	pokojami	kuframi	groszami

D type

	'thing, matter'	'village, countryside' (moveable e[2])	'salt' (o u)
Sg.			
V.	rzeczy!	wsi!	soli!
N.	rzecz	wieś	sól
A.	rzecz	wieś	sól
G.	rzeczy	wsi	soli
D.	rzeczy	wsi	soli
L.	rzeczy	wsi	soli
I.	rzeczą	wsią	solą
Pl.			
N.	rzeczy	wsie or wsi	sole (mineralne)
A.	rzeczy	wsie or wsi	sole
G.	rzeczy	wsi	soli
D.	rzeczom	wsiom	solom
L.	rzeczach	wsiach	solach
I.	rzeczami	wsiami	solami

E type

	'wife'	'land, earth'	'restaurant'	'street'
Sg.				
V.	żono!	ziemio!	restauracjo!	ulico
N.	żona	ziemia	restauracja	ulica
A.	żonę	ziemię	restaurację	ulicę
G.	żony	ziemi	restauracji	ulicy
D.	żonie	ziemi	restauracji	ulicy
L.	żonie	ziemi	restauracji	ulicy
I.	żoną	ziemią	restauracją	ulicą
Pl.				
N.	żony	ziemie	restauracje	ulice
A.	żony	ziemie	restauracje	ulice
G.	żon	ziem	restauracji/restauracyj	ulic
D.	żonom	ziemiom	restauracjom	ulicom'
L.	żonach	ziemiach	restauracjach	ulicach
I.	żonami	ziemiami	restauracjami	ulicami

	'river'	'lady'	'goddess'	'hand' (e∼o)w̃l
Sg.				
V.	rzeko!	pani!	bogini!	ręko
N.	rzeka	pani	bogini	ręka
A.	rzekę	panią	boginię	rękę
G.	rzeki	pani	bogini	ręki
D.	rzece	pani	bogini	ręce
L.	rzece	pani	bogini	ręce
I.	rzeką	panią	boginią	ręką
Pl.				
N.	rzeki	panie	boginie	ręce
A.	rzeki	panie	boginie	ręce
G.	rzek	pań	bogiń	rąk
D.	rzekom	paniom	boginiom	rękom
L.	rzekach	paniach	boginiach	rękach
I.	rzekami	paniami	boginiami	rękami

	EB type		CA type
	'diplomat'	(family name)	'document, portrait (nude)'
Sg.			
V.	dyplomato	Chodźko	akcie
N.	dyplomata	Chodźko	akt
A.	dyplomatę	Chodźkę	akt
G.	dyplomaty	Chodźki	aktu
D.	dyplomacie	Chodźce	aktowi
L.	dyplomacie	Chodźce	akcie
I.	dyplomatą	Chodźką	aktem
Pl.			
N.	dyplomaci	Chodźkowie	akta
A.	dyplomatów	Chodźków	akta
G.	dyplomatów	Chodźków	aktów
D.	dyplomatom	Chodźkom	aktom
L.	dyplomatach	Chodźkach	aktach
I.	dyplomatami	Chodźkami	aktami

Note: Nouns of CA type all have alternate forms of the plural of C type, often with different meaning, e.g. akt with C pl. (NA pl. akty) signifies "act (of play)".

	BC type		AB type
	'horse'	'male goat' (o∼Ø)	'child'
Sg.			
V.	koniu!	kozle	dziecko
N.	koń	kozioł	dziecko
A.	konia	kozła	dziecko
G.	konia	kozła	dziecka
D.	koniowi	kozłowi	dziecku
L.	koniu	kozle	dziecku
I.	koniem	kozłem	dzieckiem
Pl.			
N.	konie	kozły	dzieci
A.	konie	kozły	dzieci
G.	koni	kozłów	dzieci
D.	koniom	kozłom	dzieciom
L.	koniach	kozłach	dzieciach
I.	końmi	kozłami	dziećmi

AD type

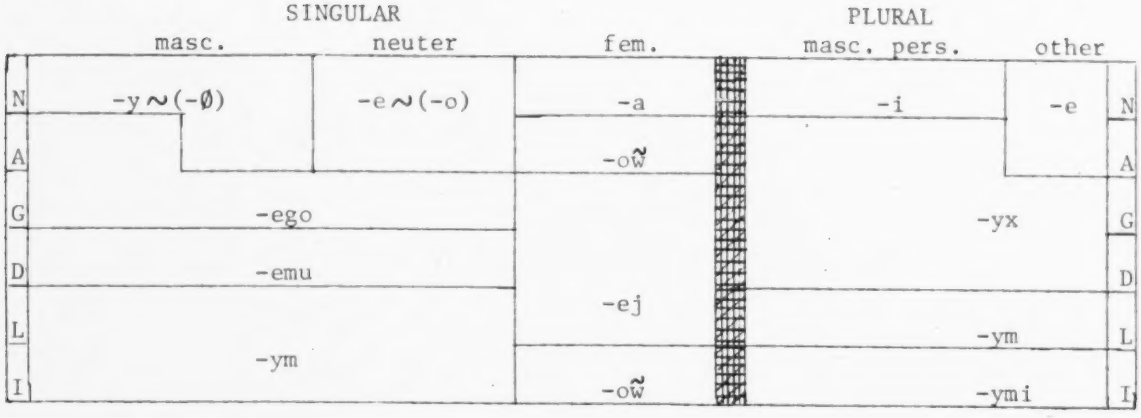
	'eye'
Sg.	
V.	oko
N.	oko
A.	oko
G.	oka
D.	oku
L.	oku
I.	okiem
Pl.	
N.	oczy
A.	oczy
G.	oczu
D.	oczom
L.	oczach
I.	oczami

Mixed adjectival-substantival class

	'judge'
Sg.	
V.	sędzio!
N.	sędzia
A.	sędziego/sędzię
G.	sędziego
D.	sędziemu/sędzi
L.	sędzi/sędzim
I.	sędzią
Pl.	
N.	sędziowie
A.	sędziów
G.	sędziów
D.	sędziom
L.	sedziach
I.	sędziami

2.2 ADJECTIVES

Polish adjectives are inflected for number (singular and plural), gender (masculine, neuter, and feminine in the singular; masculine personal, and non-masculine personal in the plural), and case (six cases N A G D L I are distinguished, the V being the same as the N in both singular and plural). The adjective has the following endings:



2.2.1 Remarks on the endings.

(1) Initial /y/ in endings is replaced by /i/ after consonants which cannot precede /y/.

(2) Before endings with initial /e/, stem-final /k g/ → /k' g'/.

(3) Hard stems undergo the same changes as before the ending -i in the N pl. of B type nouns (see 2.1.2.3) plus ś → ś (stage IIb → IIa).

(4) The vast majority of adjectives have the endings -y in the masculine singular N and -e in the neuter singular N and A. A few adjectives have alternate forms with -Ø in the masculine singular N and -o in the neuter singular N and A, which are used only predicatively (not attributively). Adjectives which have a zero ending may show moveable e or alternation of stem V /o/ with /u/. The adjectives rad 'glad', wart 'worthy', and kontent have only predicative forms and show -Ø in the masculine singular N.

(5) The adjectives żaden 'no', nasz 'our', wasz 'your', czyj 'whose' have only -Ø in the masculine singular N; żaden has moveable e.

(6) Certain adjectives, namely ten 'this, that', tamten 'that over there', wszystek 'all', jeden 'one', sam 'alone', on 'that' (archaic), ów 'that' (archaic), have only -Ø in the masculine singular N and -o in the neuter singular N and A.

Ten and tamten have an extension /en/ in the masculine singular N, elsewhere their stems are t- and tamt-. Wszystek and jeden have moveable e, while ów has /o∼u/.

(7) The adjectives mój 'my', twój 'your (singular familiar)', and swój (reflexive possessive) have only -Ø in the masculine singular Nom. They show the V change /o∼u/. In addition alternate short forms (less used) for some of the cases exist, in which short forms the /oj/ of the stem is lost leaving m-, tf-, and sf-.

(8) When adjectives agree with B and BC substantives (mainly masculine substantives denoting living beings) the A sg. is the same as the G sg. With other masculine substantives N and A sg. are the same. Thus, in the accusative, there is a distinction, masculine animate vs. inanimate. All statements above regarding the masculine singular N therefore also apply to the masculine singular A when it is the same as the N. This is signified by ∽ in the example paradigms (2.2.2) below.

(9) Substantivized adjectives. Polish has a fair number of words which have adjective morphology, but which function syntactically as substantives, e.g. luty "February', koniuszy 'groom'. An important part of these are proper nouns (given names, family names, place names), e.g. Eustachy "Eustace', Kamiński, Zakopane, etc. Some of these show declensional peculiarities; personal names such as Eustachy, Linde, as well as soft stems designating masculine persons (e.g. koniuszy) have N pl. with substantival ending and stem suffix -ovj-. Eustachowie, Lindowie, koniuszowie; family names of foreign origin in -e declined as neuter adjectives (e.g. Linde) have the sg. IL ending -em; masculine and neuter place names of this declension have -em in L sg.

2.2.2 Example paradigms

'good'

	masc.	neuter	fem.		masc. pers.	other
Sg.				Pl.		
N.	dobry	dobre	dobra	N.	dobrzy	dobre
A.	~	dobre	dobrą	A.	dobrych	dobre
G.	dobrego		dobrej	G.	dobrych	
D.	dobremu		dobrej	L.	dobrych	
L.	dobrym		dobrej	D.	dobrym	
I.	dobrym		dobrą	I.	dobrymi	

'Polish'

	masc.	neuter	fem.		masc. pers.	other
Sg.				Pl.		
N.	polski	polskie	polska	N.	polscy	polskie
A.	~	polskie	polska	A.	polskich	polskie
G.	polskiego		polskiej	G.	polskich	
D.	polskiemu		polskiej	L.	polskich	
L.	polskim		polskiej	D.	polskim	
I.	polskim		polską	I.	polskimi	

'cheap'

	masc.	neuter	fem.		masc. pers.	other
Sg.				Pl.		
N.	tani	tanie	tania	N.	tani	tanie
A.	~	tanie	tanią	A.	tanich	tanie
G.	taniego		taniej	G.	tanich	
D.	taniemu		taniej	L.	tanich	
L.	tanim		taniej	D.	tanim	
I.	tanim		tanią	I.	tanimi	

'our'

	masc.	neuter	fem.		masc. pers.	other
Sg.				Pl.		
N.	nasz	nasze	nasza	N.	nasi	nasze
A.	~	nasze	naszą	A.	naszych	nasze
G.	naszego		naszej	G.	naszych	
D.	naszemu		naszej	L.	naszych	
L.	naszym		naszej	D.	naszym	
I.	naszym		naszą	I.	naszymi	

'this'

Sg.	masc.	neuter	fem.	Pl.	masc. pers.	other
N.	ten	to	ta	N.	ci	te
A.	~	to	tą/tę	A.	tych	te
G.	tego		tej	G.	tych	
D.	temu		tej	L.	tych	
L.	tym		tej	D.	tym	
I.	tym		tą	I.	tymi	

2.3 PRONOUNS

2.3.1 Third person pronouns

Stem alternation /on∼j∼Ø∼ń/

on- appears in N sg. and pl.; ń- appears when the pronoun is head of a prepositional phrase and always in the I sg. and pl. Otherwise j- occurs when the ending begins with /e/, Ø- when with /y/ → /i/. The short forms go, mu, delete the stem and the first vowel of the respective ending. The endings are like ten (with /i/ replacing /y/ after soft consonant and word-boundary--/y/ cannot stand in initial position). Note that the endings after on- are those of the noun; in the remaining forms those of the adjective.

Singular

	masc.		neuter		fem.	masc. pers.	other
N	on		ono	N	ona	N oni	one
A			je	A	ją, nią	A	je, nie
	long	short					
G	jego, niego		go	I	nią	G ich, nich	
D	jemu, niemu		mu	G	jej, niej	L	
L	nim			D		D im, nim	
I				L		I imi, nimi	

2.3.2 First and second person pronouns (and reflexive, with person neutralized); these show no distinction of genders.

A. Singular and reflexive (gender neutralized)

	1st pers. 'I'	2nd pers. 'you, thou'	(reflexive)
N	ja	ty	---
AG	mnie	ciebie	siebie
DL	mnie	tobie	sobie
I	mną	tobą	sobą

	1st pers. 'I'	2nd pers. 'you, thou'	(reflexive)
short forms			
AG	mię	cię	się
D	mi	ci	

Full forms: The stem-final consonant is stage I in the instrumental (and nominative of ty) and stage II in the remaining oblique cases. ty and the reflexive show internal vowel alternation (e ~ o)[1] with /e/ in the AG, /o/ in the remaining oblique cases. The consonant preceding this V alternation is stage II before /e/, stage I before /o/. ja shows irregular alternation in the N.

The endings are: /-o$\tilde{w}$/ in the I, /-e/ in the remaining oblique cases, /-a/ (after /j-/) and /-y/ (after /t-/) in the N.

Short forms: There are short forms for AG and (in ja and ty only) for the dative. The stems of the short forms consist of the stage II of the initial consonants of the long stems, /mj/, /ć/, and /ś/. The endings are /e$\tilde{w}$/ for AG, /i/ for dative. /mj/ loses its /j/ automatically before /i/. A substandard short dative se of the reflexive exists, in rural speech, which does not conform to the foregoing pattern.

B. Plural

	1st pers. 'we'	2nd pers. 'you'
N	my	wy
AGL	nas	was
D	nam	wam
I	nami	wami

These pronouns show the stems 'you' v- and 'we' m- (in N) ~ n- (in oblique cases). The endings are N -y, AGL -as, D -am, I -ami.

2.3.3 Interrogative pronouns (and their negative compounds)

N	kto	(nikt)	co	(nic)
A	kogo		co	
G	kogo		czego	
D	komu		czemu	
LI	kim		czym	

The forms of negative pronouns nikt 'no one' and nic 'nothing' are formed by prefixing /ńi-/ to the respective forms of kto or co, except in the nominative, where zero ending substitutes for the -o of kto, co.

The neuter singular pronouns co 'what' and nic 'nothing' have the stem /c-/, /ńi-c-/ in the NA and /č-/, /ńi-č-/ in the oblique cases, with endings -o (co) and zero (nic) in the NA and regular adjective endings (masculine-neuter singular) in the oblique cases.

The masculine singular pronouns kto 'who', nikt 'no one', like masculine personal substantives, show AG with the same ending. LI have the regular masculine-neuter singular adjective endings, while AG and D show endings similar to the adjective ending, but with /o/ replacing /e/ (an isolated remnant of a once extensive (o ~ e)[1] alternation, /e/ having replaced /o/ in hard stem adjectives by analogy with the soft stems).

2.4 NUMERALS

The numerals, with the exception of dwa 'two' and oba or obydwa 'both', distinguish the same gender categories as the plural adjective (masculine personal vs. all other in NA, no gender distinction in remaining cases). Dwa and oba, obydwa distinguish masculine personal, feminine, and other (masculine non-personal and neuter) in NA.

/dv ~ dvj (before /e/)/ 'two', /ob ~ obj/ 'both'

	masc. pers.	other	fem.
N	dwaj	dwa	dwie
A			
G	dwóch, dwu		
L			
D	dwom, dwóm, dwu		
I	dwoma, dwu		dwoma, dwiema

/c̆s̆-/ 'three' /c̆ter-/ 'four'

	masc. pers.	other
N	trzej	trzy
A		
G	trzech	
L		
D	trzem	
I	trzema	

In the foregoing numerals there is a tendency for the G (dwóch, etc.) to be used in place of the masculine personal N.

Numerals from five up have the following endings:

	masc. pers.	other
NA		-Ø∼(-a '20, 3-400', -i '30, 40', -e '11-19', '200', -o '100')
GL D	-u	
I	-u∼-oma (numerals from '100 up have only -u)	

2.4.1 Stems

5.	pjeńć-	pięciu, pięć	8.	oś(e)mj-	ośmiu, osiem
6.	šešć-	sześciu, sześć	9.	ʒevjeńć-	dziewięciu, dziewięć
7.	śed(e)mj-	siedmiu, siedem	10.	ʒeśeńć-	dziesięciu, dziesięć

11-19 show IIa softening before -e thus /jedenast-/ /jedenaść-e/

11.	jedenast-	jedenastu, jedenaście
12.	dvunast- ∼ dvanaść-	dwunastu, dwanaście
13.	čšynast-	trzynastu, trzynaście
14.	čternast-	czternastu, czternaście
15.	pjetnast-	piętnastu, piętnaście

(colloquial usage lacks nasalization after /e/ in 15 and 19!)

16.	šesnast-	szesnastu, szesnaście
17.	śedemnast-	siedemnastu, siedemnaście
18.	ośemnast-	osiemnastu, osiemnaście
19.	ʒevjetnast-	dziewiętnastu, dziewiętnaście

20-30-40 also show stem-final IIa softening before -a ('20') or -i ('30-40')

20.	dvuʒest- ∼ dvaʒeść-	dwudziestu, dwadzieścia

30. čšy$_{3}$ést- trzydziestu, trzydzieści

40. čter$_{3}$ést- czterdziestu, czterdzieści

50-90 show stem-final IIa softening before all endings but zero, (e ~ o)$\widetilde{w}^{1}$ change also takes place.

50. pjeń$_{3}$ésent- pięćdziesięciu, pięćdziesiąt

60. šeź$_{3}$ésent= sześćdziesięciu, sześćdziesiąt

70. śedem$_{3}$ésent- siedemdziesięciu, siedemdziesiąt

80. ośem$_{3}$ésent- osiemdziesięciu, osiemdziesiąt

90. $_{3}$éveń$_{3}$ésent- dziewięćdziesięciu, dziewięćdziesiąt

100. st- stu, sto

200. shows IIa softening before -e: dvust-, dvjeść-, dwustu, dwieście

300. čšyst- trzystu, trzysta

400. čteryst- czterystu, czterysta

500-900 are formed by adding the unchanging particle -set to the respective forms of the numerals 5-9; thus pięciuset, pięćset, etc.

Note: jeden 'one' is morphologically an adjective, tysiąc '1000' and milion 'million' are masculine nouns.

2.4.2 Indefinite numbers

kilka 'several, a certain number'

	masc. pers.	other
NA		kilka
GLD	kilku	
I	kilku (~ kilkoma)	

similarly:

'several (in the teens)' kilkunastu, kilkanaście (note: kilk- plus -nast-)

I ~ kilkunastoma

'several (tens)' kilkudziesięciu, kilkadziesiąt (kilk- plus -ʒeśent-)
'several (hundreds)' kilkuset, kilkaset (kilk- plus -set).
ile 'how many', tyle 'so many', wiele 'many', niewiele 'few':

	masc. pers.	other
NA		ile
GLD	ilu	

parę 'a few, a pair'

	masc. pers.	other
NA		parę
GLD	paru	

The "plus one-half" numerals: do not distinguish case and are unchanged in all cases.

1/2 pół indeclinable

1 1/2 półtora usually indeclinable, but feminine forms
półtora ~ półtorej exist.

All further forms consist of unchanging pół plus the stem of the next higher ordinal numeral plus ending -a (or alternate feminine forms with ending -y (~ -i) or (-ej). Thus:

2 1/2 półtrzecia (fem. półtrzeci ~ półtrzeciej)

3 1/2 półczwarta (fem. półczwarty ~ półczwartej) etc.

2.5 FORMATION OF COMPARATIVE/SUPERLATIVE OF ADJECTIVES AND ADVERBS

Polish adjectives and adverbs form their comparative in either of two ways: a) morphologically, through addition of a stem suffix (cf. English black, blacker), b) through a syntactic phrase (cf. English obvious, more obvious) consisting of the basic adjective or adverb preceded by the adverbs bardziej or więcej. Thus, płaski 'flat' bardziej płaski 'flatter'. The phrasal

comparative is particularly characteristic of adjectives with the suffix -sk-. Below we shall treat the morphological comparative.

2.5.1 The morphological comparative of adjectives.

The comparative suffix is -š- ~ -ej-š-. -š- is added to most adjective stems ending in single consonant or nasal plus consonant.

nowy: nowszy 'new'

Before it, beside the automatic change of voicing assimilation, we have /w → l, n → ń/ (I → II) and /g → ž/ (→ /š/) (I → IIa). There may be a morphophonemic change of root vowel, e.g. /e ~ o/[1], /e ~ a/, /(e ~ o)w̃/.

długi:	dłuższy	'long'
biały:	bielszy	'white'
czerwony:	czerwieńszy	'red'

Before it, stem-final -k-, -ek-, -ok- are deleted.

słodki:	słodszy	'sweet'
daleki:	dalszy	'far'
wysoki:	wyższy	'high'

(/vyšš̆y/ automatic dental to post-alveolar assimilation)

-ej-š- is added to stems ending in most consonant clusters (other than cluster of which the first member is a nasal). The stem-final consonant undergoes I → II (IIa) change before it.

ładny: ładniejszy 'pretty'

lekki: lżejszy 'light' has the stem l(e)g+k- with (e ~ ∅) alternation, dropping of /k/ before comparative formant, automatic voicing assimilation before voiceless /k/, and I → IIa change before formant.

Some stems undergo irregular change or suppletion in the comparative; note that the suffix -š- (or -ej-š-) is still added to the suppletive stem.

dobry:	lepszy	'good'	/dobr- ~ lep-/
zły:	gorszy	'bad'	/zw- ~ gor-/
wielki:	większy	'big'	/vjelk- ~ vjenk-/; note /k/ remains)
mały:	mniejszy	'small'	/maw- ~ mn-/

2.5.2 The morphological comparative of adverbs.

The formation of the comparatives of adverbs is completely parallel to that of the adjectives, except that the suffix is always -ej- rather than -š- ~ -ej-š-. Before -ej- stage I → II changes take place in stem-final consonants. Where there is a distinction between IIa and IIb, the change is I → IIa, or IIb → IIa, except that stem-final /t/ and /k/ change to /c/ (IIb).

twardo:	twardziej	'hardly'	krótko:	krócej	'shortly'
prosto:	prościej	'directly'	gładko:	gładziej	'smoothly'
drogo:	drożej	'dearly'	miękko:	mięcej	'softly'
cicho:	ciszej	'quietly'	szybko:	szybciej	'quickly'
łatwo:	łatwiej	'easily'	bardzo:	bardziej	'very'

2.5.3 The superlative is always identical with the comparative with the addition of the prefix naj-. naj- is prefixed directly to the suffixed comparative; to więcej, bardziej in the phrasal comparative.

III

THE POLISH VERB

(part 1--stem alternation and conjugation)

1.0 This section assumes the conclusions and concepts developed in Section I, "Morphophonemics" above and the same designations and symbolizations used there for the various kinds of morphophonemic change will be utilized herein below. Automatic morphophonemic changes however will not in general be treated here, since their occurrence, being automatic, is completely predictable. Hence, in treating allomorphs, those resulting from such automatic changes are not listed. Examples occurring in this text will be given in phonemic transcription only.

The Polish verb consists of the following elements arranged in the following order:

a. prefix or prefixes

b. base

c. stem-suffix or suffixes

d. thematic vowel

e. formant

f. ending

[Note that the element I term "base" here, I designate "root" in later papers dealing with other Slavic languages, reserving the term "base" for the stem minus thematic vowel. I now prefer this later terminology, but retain the terminology of the original article here.]

All the above elements have morphemic status, that is, they are morphemes or allomorphs. Elements a through d constitute the stem. Elements e and f are inflexional suffixes. Every stem contains a base and a thematic vowel. The other stem-formative elements may or may not be present. Every verb form

contains a stem and an inflexional suffix or suffixes, that is, either a formant or an ending or both. Examples of Polish verb forms broken down to show the component elements follow:

	stem		inflexional suffixes		
prefix(es)	base	suffix(es)	thematic vowel	formant	ending
roz-	-bud-	-ov-u-	-je-		-ć́e
ze-	-psu-		-Ø-	-l-	-i
roz-	-mavj-		-a-	-j-	-my
vy-	-ć́ong-	-ń́en-	-Ø-	-t-	-y
po-roz-	-da-	-v-	-a-	-ć	

The examples given above are: rozbudovujeć́e 'you construct (continuously)', zepsuli 'they spoiled', rozmavjajmy 'let's converse', vyć́ongń́enty 'pulled out', and porozdavać́ 'to distribute, to give everything out'.

2.0 The verb-stem.

The following types of changes may occur in the stem:

a. modification of the prefix.

b. phonemic alternation in the base.

c. addition of or alternation in stem-suffix(es).

d. alternation of consonants before thematic vowel.

e. alternation of thematic vowels.

Many verbs do not vary their stems at all before the endings of the various forms. A large number show a major variation between two groups of forms. I call these groups the infinitive-stem forms and the present-stem forms. The stem variant which appears before the infinitive-stem forms I call the infinitive stem. The variant which appears in the present-stem forms I call

the present stem. There is a small number of verbs with an irregular distribution of stem variants, in that more than two major stem variants appear.

2.1 Modification of the prefix.

The following verbal prefixes (preverbs) occur in Polish. A number have but one allomorph. These all end in a vowel: do-, na-, o-, po-, pše-, pšy-, vy-, za-, ńe-.

Others have one allomorph ending in a consonant and a second allomorph equivalent to the first with the addition of e: nad(e)-, ob(e)-, pod(e)-, roz(e)-, v(e)-, z(e)-, pšez(e)-, pšed(e)-. One prefix shows three allomorphs: vz ~ vez ~ vze, vez- appearing before a limited number of bases, all of which begin with consonant clusters.

Prefixes with movable e appear with the e before bases beginning with certain consonant clusters, appearing without the e otherwise. Variation within the paradigm of a single verb appears when the base changes in such a way as to begin sometimes with a cluster and sometimes with a single consonant. The prefix vz- varies under the same conditions, but sometimes has movable e at the end and more rarely between v and z.

rozedžeć 'to tear apart'	rozdar 'he tore apart'
obejdew 'I'll go around'	opšet 'he went around'
podejmje 'he'll undertake'	podjońć 'to undertake'
vzbrońony 'forbidden'	vzejść 'to rise (of the sun)'
vezbrać 'to rise'	

The above prefixes appear not only before verb bases, but also before noun bases. In addition, all but pše-, ńe-, ob-, roz-, and vz- function as prepositions too. ńe- functions as an independent adverb.

2.2 Alternation of thematic vowels.

Polish verbs show following types of alternation of thematic vowels in the present-stem forms.

a-type. Thematic a is the stem-final element in all present-stem forms. There are two exceptions. The verb mjeć has thematic e before the imperative formant: mjej 'have'. The verb dać 'to give' has thematic o in the third person plural of the present tense.

ě-type. Thematic e is the stem-final element in all present-stem forms. Verbs of this type often have alternate forms characteristic of the e-type. Relatively few verbs show this type of alternation. They are umjeć, 'to know (how)', śmjeć 'to dare', jeść 'to eat', vjeʒeć 'to know', and their compounds. The verbs jeść and vjeʒeć are exceptions to the above statements in that they (and their compounds) have thematic o in the third person plural and thematic zero in the imperative and present participle.

e-type. Thematic e occurs before all endings except the third person plural. Thematic o occurs before the third person plural ending and thematic zero before the imperative and present participle formants. Exceptions are the verb xćeć 'to want, wish' and its compounds and verbs containing the suffix -v- (davać 'to give imperfective)' with its compounds and compound verbs with the bases -sta- and -zna-, such as poznavać 'to recognize (imperfective)'). Before the imperative formant xćeć has thematic e while verbs with the stem suffix -v- have thematic a before that formant.

i-type. Thematic i occurs before all endings except the first person singular and the third person plural. Thematic e occurs before the first person singular ending and thematic o before

the third person plural ending. Thematic zero occurs before the imperative and present participle formants.

In a and e type verbs we have the same thematic vowel in all forms.

2.2.1.1 Examples of verbs in present-stem forms showing alternation of thematic vowels. In the examples given below, the bases, which do not change in these examples, are not repeated.

	swuxać́ 'to listen' (a-type)	śmjeć́ 'to dare' (ě-type)
pres. tense		
2. sg.	swux-a-š̌	śmj-e-š̌
3. sg.	-a-Ø	-e-Ø
1. pl.	-a-my	-e-my
2. pl.	-a-ć́e	-e-ć́e
1. sg.	-a-m	-e-m
3. pl.	-a-jo$\bar{w}$	-e-jo$\bar{w}$
pres. part.	-a-jonc-Ø	-e-jonc-Ø
imp.		
2. sg.	-a-j-Ø	-e-j-Ø
2. pl.	-a-j-ć́e	-e-j-ć́e
1. pl.	-a-j-my	-e-j-my

	pisać́ 'to write' (e-type)	broń́ić́ 'to defend' (i-type)	žuč̌yć́ 'to throw' (i-type)
pres. tense			
2. sg.	piš̌-e-š̌	broń́-i-š̌	žuč̌-y-š̌
3. sg.	-e-Ø	-i-Ø	-y-Ø
1. pl.	-e-my	-i-my	-y-my
2. pl.	-e-ć́e	-i-ć́e	-y-ć́e
1. sg.	-e-$\bar{w}$	-e-$\bar{w}$	-e-$\bar{w}$
3. pl.	-o-$\bar{w}$	-o-$\bar{w}$	-o-$\bar{w}$

	pisać 'to write'	broníć 'to defend'	žúcić 'to throw'
pres. part.	pis-o-nc-Ø	bron-o-nc-Ø	žuc-o-nc-Ø
imp.			
2. sg.	-Ø-Ø-Ø	-Ø-Ø-Ø	-Ø-Ø-Ø
2. pl.	-Ø-Ø-ce	-Ø-Ø-ce	-Ø-Ø-ce
1. pl.	-Ø-Ø-my	-Ø-Ø-my	-Ø-Ø-my

2.2.2 Polish verbs show the following types of alternation of thematic vowels in the infinitive-stem forms:

a-type. This type has thematic a in all forms.

e-type. Verbs of this type have thematic e before the infinitive formant -ć, before the allomorph -l- of the l-formant, and before the formant -ń- of the verbal noun. Before the allomorph -w- of the l-formant thematic a occurs. Before the allomorph -n- of the past participle formant most verbs of this type have a, though many (particularly of the e/ě class; see 2.2.4 below) have thematic o. Before the allomorph -ń- of the past participle formant (which occurs only in the masculine personal nominative plural) e or a occurs. We have e in those verbs where the base variant occurring in the past participle is the same as that occurring in the verbal noun (including all verbs with thematic o before -n-), while a occurs if different allomorphs of the base occur in the past participle and in the verbal noun.

i-type. In this type thematic o occurs before the allomorph -n- of the past participle formant, e before the allomorph -ń- of the past participle formant and before the verbal noun formant -ń-, and before all other formants thematic i (or y after retracted consonants) occurs.

e-type. In this type thematic zero occurs in all forms, if the element preceding the thematic vowel (base or stem-suffix) ends in a vowel or in a nasal consonant or semivowel. If the preceding element ends in a consonant other than w ⌣ l, r ⌣ ž, or nasal consonant, thematic o will occur before the allomorph -n- of the past participle formant, thematic e before the allomorph -ń- of the past participle formant and before the formant -ń- of the verbal noun, and thematic zero before all other formants. If the preceding element ends in r ⌣ ž ⌣ ar, there will be thematic e after ž (infinitive form) and zero elsewhere. If the preceding element ends in l, e will occur before the infinitive formant -ć, before the verbal noun formant -ń-, and before the allomorph -ń- of the past participle formant, while o will occur before the allomorph -n- of the past participle formant, zero occurring before all other formants.

2.2.2.1 Examples of verbs in infinitive-stem forms showing alternations of thematic vowels. In the examples given below, the base will be given once and will not be given again unless its phonemic shape changes. Those forms where no base is given in the example have bases of the same phonemic shape as in the last example above in the column where a base is given. This convention will be followed in all examples appearing in tables hereafter.

	swuxać́ 'to listen' (a-type)	viʒéć́ 'to see' (ě-type)	swyšéć́ 'to hear' (ě-type)
inf.	swux-a-ć́	viʒ́-e-ć́	swyš́-e-ć́
gerund	-a-fšy	-a-fšy	-a-fšy
l-form			
masc. sg.	-a-w-Ø	-a-w-Ø	-a-w-Ø
neut. sg.	-a-w-o	-a-w-o	-a-w-o
fem. sg.	-a-w-a	-a-w-a	-a-w-a
impers. pl.	-a-w-y	-a-w-y	-a-w-y
pers. pl.	-a-l-i	-e-l-i	-e-l-i
past. part.			
masc. sg. nom.	-a-n-y	-a-n-y	-a-n-y
pers. pl. nom.	-a-ń-i	-a-ń-i	-e-ń-i
verbal noun	-a-ń-e	viʒ-e-ń-e	-e-ń-e

	zemdléć́ 'to faint' (ě-type)	broníć́ 'to defend' (i-type)	žučyć́ 'to throw' (i-type)
inf.	ze-mdl-e-ć́	broń́-i-ć́	žuč́-y-ć́
gerund	-a-fšy	-i-fšy	-y-fšy
l-form			
masc. sg.	-a-w-Ø	-i-w-Ø	-y-w-Ø
neut. sg.	-a-w-o	-i-w-o	-y-w-o
fem. sg.	-a-w-a	-i-w-a	-y-w-a
impers. pl.	-a-w-y	-i-w-y	-y-w-y
pers. pl.	-e-l-i	-i-l-i	-y-l-i
past. part.			
masc. sg. nom.	-o-n-y	-o-n-y	-o-n-y
pers. pl. nom.	-e-ń-i	-e-ń-i	-e-ń-i
verbal noun	-e-ń-e	-e-ń-e	-e-ń-e

	myć́ 'to wash' (e-type)	vjeść́ 'to convey' (e-type)	čšeć́ 'to rub' (e-type)
inf.	my-Ø-ć́	vjeś́-Ø-ć́	čš-e-ć́
gerund	-Ø-fšy	vjuš-Ø-šy	tar-Ø-šy
l-form			
masc. sg.	-Ø-w-Ø	vjus-Ø-Ø-Ø	-Ø-Ø-Ø
neut. sg.	-Ø-w-o	vjoz-Ø-w-o	-Ø-w-o
fem. sg.	-Ø-w-a	-Ø-w-a	-Ø-w-a
impers. pl.	-Ø-w-y	-Ø-w-y	-Ø-w-y
pers. pl.	-Ø-l-i	vjeź-Ø-l-i	-Ø-l-i
past part.			
masc. sg. nom.	-Ø-t-y	-o-n-y	-Ø-t-y
pers. pl. nom.	-Ø-ć́-i	-e-ń-i	-Ø-ć́-i
verbal noun	-Ø-ć́-e	-e-ń-e	-Ø-ć́-e

2.2.3 Morphemic status of the thematic vowels.

In a verb like swuxać́, which has thematic a in both present and infinitive stem forms, it is obvious that each occurrence of a is an allomorph of one morpheme, since the thematic a's are phonemically identical and occur in complementary environments. It is likewise easy to demonstrate that the occurrence of i and y as thematic vowels in the various forms of brońić́ and žučyć́ are allomorphs of one morpheme, since the distributions of i and y are completely parallel, but complementary in that y occurs only after elements ending in retracted consonants and i occurs after all other phonemes (see "Morphophonemics of Polish" 1.3.10 for the pertinent general morphophonemic statement). If we examine some of the other examples, we find alternations of e with o and e with a occurring under circumstances in part similar to those under which these vocalic alternations take place in other morphemes. In the infinitive-stem forms we have alternations of the

types (e ∽ o)[2] and (e ∽ a) (see "Morphophonemics", 1.5.2.1.2).

Since e and o and e and a respectively alternate in a manner suggesting membership in the same morphemes and since both sets show distributions partially parallel to those of the morphemes a and i, we may tentatively posit two additional thematic vowel morphemes e ∽ o and e ∽ a.

In verbs like śmjeć we have only thematic e occurring in the present-stem, but we assign this e to the e ∽ a morpheme, since e ∽ a is the thematic vowel of the infinitive-stem forms of these verbs and there are other verbs where e ∽ o does occur in the present-forms. In verbs like pisać we have e ∽ o alternating with thematic zero in the present-stem forms, while in verbs like broníć or žužyć we have e ∽ o alternating with zero and with i in both present and infinitive stem forms. We cannot assign e ∽ o and i to the same morpheme, as they contrast in many positions (piš-e-š versus broń-i-š, čš-e-ć versus broń-i-ć, for example). Therefore, we assume that in verbs like broníć we have two thematic vowel morphemes, one occurring in certain forms, the other in others. We may further say that in verbs like broníć the contrast between thematic i and thematic e ∽ o is neutralized in those forms where we have e ∽ o, since there is never a contrast between e ∽ o and i in these forms.

Verbs like zemdleć offer a further difficulty, for in their infinitive-stem forms they show e alternating both with a and o. We assume the presence of two morphemes, e ∽ o occurring in the past participle and e ∽ a in the l-form and gerund. Since only e occurs in the infinitive and verbal noun, we cannot determine whether this e belongs to e ∽ o or to e ∽ a.

Finally, we are faced with the problem of thematic zero. This always occurs in conjunction with e ∽ o, both in infinitive-stem forms and in present-stem forms.

There are two possible solutions. We may either regard zero as an allomorph of e ∽ o or else we may simply state that no thematic vowel occurs in this position.

The former solution is recommended by two facts. One is that e ∽ Ø is a widespread alternation in Polish (see "Morphophonemics", 1.5.2.1.5). The other is that greater symmetry of distribution of morphemes is obtained, if we posit a zero allomorph of e ∽ o. I prefer this solution, but those who prefer less extensive use of zero allomorphs may simply interpret the thematic zeros in my formulas as zeros which mean nothing (non-occurrence of morpheme) rather than zeros which mean something (occurrence of zero allomorph).

We have therefore four morphemes: a, i, e ∽ a, and e ∽ o ∽ Ø. It is not difficult to obtain contrasts between these morphemes. Thus:

a with i: Those forms of žučyć 'to throw (perfective)' which have thematic i versus corresponding forms of žučać 'to throw (imperfective)'

a with e ∽ o ∽ Ø: The forms of vypijać 'to drink up (imperfective)' versus the corresponding forms of vypić 'to drink up (perfective)'

a with e ∽ a: The forms of povjeǽeć 'to say (perfective)' versus the corresponding forms of povjadać 'to say (imperfective)'

e ∽ o ∽ Ø with i: Those forms of nośić 'to carry (repetitive)' which have thematic i versus corresponding forms of ńeść 'to carry'

I have not been able to find minimal contrasts between e ∽ a on the one hand and i and e ∽ o ∽ Ø on the other. However, I posit e ∽ a as a morpheme

separate from both the latter morphemes on the basis of its occurrence in morphemically comparable environments.

2.2.4 Polish verb classification on the basis of thematic vowel type.

We have seen that there are four types of present-stem forms, in which there occur respectively the thematic vowel morphemes a, e∩a, e∩o∩Ø, and i plus e∩o∩Ø. We also have types of infinitive-stem forms, in which there occur the thematic vowel morphemes a, e∩a (sometimes e∩a plus e∩o∩Ø), e∩o∩Ø, and i plus e∩o∩Ø. As all Polish verbs have present-stem forms of one of the above four types and likewise infinitive-stem forms of one of the four types listed, the verbs may be divided into classes according to which combination of present and infinitive stem types they show. This classification is useful not only in listing the occurrences of the thematic vowel morphemes but in charting the occurrence of other alternations as well. It will be adopted in this study as the basic Polish verb classification.

Below are listed the various classes of verbs:

A. Verbs with present and infinitive stem forms having the same thematic vowel alternation.
   a. Verbs with the same thematic vowel morpheme in all forms.
      1. Thematic a (designation: a-verbs)
      2. Thematic e∩o∩Ø (e-verbs)
      3. Thematic e∩a (e-verbs)
   b. Verbs with same combination of thematic vowel morphemes in both present and infinitive stems.
      4. Thematic i plus thematic e∩o∩Ø (i-verbs)

B. Verbs in which the present and infinitive stems show dissimilar thematic vowel morphemes.

5. Thematic a in present-stem forms, thematic e ̯a in infinitive-stem forms (a/ĕ-verbs).
6. Thematic e ̯o ̯∅ in present-stem forms, a in infinitive-stem forms (e/a-verbs).
7. Thematic e ̯o ̯∅ in present-stem forms, e ̯a in infinitive-stem forms (e/ĕ-verbs).
8. Thematic e ̯a in the present-stem forms, e ̯o ̯∅ in the infinitive-stem forms (ĕ/e-verbs).
9. Thematic i plus e ̯o ̯∅ in the present-stem forms, a in the infinitive-stem forms (i/a-verbs).
10. Thematic i plus e ̯o ̯∅ in the present-stem forms, e ̯a in the infinitive-stem forms (i/ĕ-verbs).

Examples of various verbs of the above classes are given in tabular form at the end of this study. Of the above classes, a, i, and e/a contain a large proportion of all Polish verbs. The a and i classes and to a lesser extent the e/ĕ class are productive, and the e/a class is productive in conjunction with the stem-suffixes u ̯ov and u ̯yv.

The e-verbs make up a fair proportion of the total number of verbs, but their class is no longer productive, except in conjunction with the stem-suffix n ̯nowˉ. The i/ĕ-verbs also form a fair proportion of the total, but the class is not productive. The remaining non-productive classes are represented by but a few verbs each. The ĕ-verbs frequently have alternate present-stem forms of the e type, thus showing a tendency to be assimilated to the e/ĕ-class. The a/ĕ-class is represented only by the verb mieć 'to have' and its compounds and the ĕ/e class by jeść 'to eat' and its compounds.

2.3 Prethematic consonantal alternation.

Alternation of the consonant preceding the thematic vowel (that is, the last consonant of the element, base or stem-suffix, immediately preceding the vowel) is very frequently conditioned by the thematic vowel (that is, by the particular allomorph of the thematic morpheme) which occurs after them. The alternations which occur are various types of substitutive softening (classified according to the scheme in "Morphophonemics" 1.5.1.1). Alternations covered by morphophonemic statements classified as automatic change are in principle not listed in this paper, as their occurrence is automatic. Thus, this section does not treat such alternations as v∩f in muv-i-ć 'to speak', muf-Ø-Ø-će 'speak!'. However, in a number of cases below I have mentioned the occurrence of such changes in various verbs, particularly when they occur together with special morphophonemic changes, as an aid to the reader, but always specifying in such cases that the change mentioned is general (automatic). All statements below concerning simple (unprefixed) verbs apply also to their prefixed compounds, unless otherwise stated.

The prethematic consonant alternations treated in this section are always conditioned by the occurrence of some morpheme or morpheme variant (thematic vowel, formant, or ending) in their environment. They do not have morphemic status themselves, but are, as pointed out above, examples of special morphophonemic alternation.

2.3.1 Verbs of the a and e classes, with the exception of dać 'to give' and vjeʒeć 'to know' show no prethematic consonantal variation. The two verbs mentioned show the alternation d∩Ø (see "Morphophonemics" 1.5.1.2.2) conditioned by an alternation of the preceding vowel with zero (see 2.5.2.2.1 and 2.5.2.2.3 below) with stage II alternants of d

occurring in the forms which have the vowel and zero in the forms which have no vowel. In dać the one form with the vowel a in the base (3. pl. pres. daʒǭ) has prethematic ʒ (stage IIb). In vjeʒ́eć́, of those forms having the vowel e in the base the 3. pl. pres., pres. part., imp., and the verbal noun have prethematic ʒ and the remaining forms with e in the base have prethematic ʒ̂. See 6.1.1 and 6.2.1 for examples.

2.3.2 The ě/e-verb jeś́ć́ 'to eat' shows the alternation d∪Ø occurring as in the verbs treated in the preceding paragraph, i.e. in conjunction with an alternation of the preceding vowel with zero. In those forms which have a vowel in the base (see 2.5.2.2.7 below) d or its stage II alternants occur. ʒ occurs in the 3. pl. pres., imp., pres. part., past part., and verbal noun, with d in the remaining forms showing a vowel in the base. Before the infinitive formant ć́, d is replaced by ś́ in accordance with "Morphophonemics" 1.5.1.2.3 See 6.8 below for examples.

2.3.3 The a/ě verb mjeć́ 'to have' shows the base-variant m- (stage I) before thematic morpheme a in the present-stem forms other than the imperative and the variant mj- (stage II) before thematic e∪a in the imperative and in the infinitive-stem.

m-a-m 'I have' mj-e-j-ć́e 'have!' mj-a-w-a 'she had'

2.3.4 The i/a-verb spać́ 'to sleep' shows the cluster sp (stage I) before thematic a, śpj (stage II) before thematic e and o, and śp (stage II minus j- see "Morphophonemics" 1.1.6.1) before thematic i and zero.

sp-a-ć́ 'to sleep' śpj-e-w̃ 'I'm sleeping'

śp-Ø-ij-Ø 'sleep!' śp-i-Ø 'he's sleeping'

2.3.5 In i-verbs, if the prethematic consonant belongs to the velar or liquid class, the consonant will show no change, being uniformly stage II (stage IIa in the case of velars). If the prethematic consonant is labial or front, there will be an alternation. Labial consonants will be stage II

before all thematic vowels but i and zero, before which latter they automatically lose the following j, thus becoming stage I. Front consonants show stage IIa before thematic i and zero and stage IIb before thematic e and o.

trafić 'to hit'		nosić 'to carry'
trafj-e-$\bar{w}$	1. sg. pres.	nos̆-e-$\bar{w}$
-o-nc-Ø	pres. part.	-o-nc-Ø
-o-n-y	past part.	-o-n-y
-e-$\acute{n}$-e	verbal noun	-e-$\acute{n}$-e
traf-i-Ø	3. sg. pres.	nos$\acute{}$-i-Ø
-i-$\acute{c}$	inf.	-i-c$\acute{}$
-i-w-a	fem. sg. l-form	-i-w-a
-Ø-Ø-Ø	2. sg. imp.	-Ø-Ø-Ø

2.3.6 Verbs of the i/ě-class show no change if the prethematic consonant is velar or liquid other than n, the consonant being stage II before all thematic vowels. If the prethematic consonant is labial, it will be stage II before all thematic vowels except thematic i and zero, in accord with the general morphophonemic principles in Polish. If the prethematic consonant is n, we have n (stage I) before thematic e and o followed by the ending $\bar{w}$ and the formant -nc- but $\acute{n}$ (stage II) before all other occurrences of thematic vowels. If the prethematic consonant is of the front class, we have stage IIa in all forms except present tense forms with the ending $\bar{w}$, the present participle, and the verbal noun, where we have stage IIb.

lubʲićˊ 'to love'	
lup-Ø-Ø-Ø	imp. 2. sg.
lub-i-Ø	3. sg. pres.
lubj-e-w̃	1. sg. pres.
-o-nc-Ø	pres. part.
-e-ćˊ	inf.
-a-w-a	fem. sg. l-form
-a-n-y	past. part.
-e-ńˊ-e	verbal noun

zapomnećˊ 'to remember'		viʒećˊ 'to see'
zapomń-Ø-ij-Ø	imp. 2. sg.	-----
-i-Ø	3. sg. pres.	viʒˊ-i-Ø
-e-ćˊ	inf.	-e-ćˊ
-a-w-a	fem. sg. l-form	-a-w-a
za-pomńˊ-a-n-y	past. part.	viʒˊ-a-n-y
-e-ńˊ-e	verbal noun	viʒ-e-ńˊ-e
zapomn-e-w̄	1. sg. pres.	-e-w̄
	pres. part.	-o-nc-Ø

2.3.7.1 Verbs of the e class with prethematic k and g show k and g (stage I) in the present tense forms with the ending w̄ (1. sg. and 3. pl.) hereafter called w̄-forms; in the present participle, in the l-form, and in the gerund. In the remaining forms, except the infinitive, they show č and ž (stage IIa). In the infinitive k or g fall and the infinitive formant occurs in its allomorph c.

pjec (< pjek-Ø-ć) 'to bake'

1. sg. pres.	pjek-e-$\bar{w}$	3. sg. pres.	pječ-e-Ø
pres. part.	-o-nc-Ø	imp. 2. sg.	-Ø-Ø-Ø
fem. sg. l-form	-Ø-w-a	past part.	-o-n-y
gerund	-Ø-šy	verbal noun	-e-ń-e

2.3.7.2 Verbs of the e class with prethematic s and z show s and z (stage I) in the $\bar{w}$-forms, in the present participle, in the l-forms except for the masc. pers. plu., and automatically š and ž in the gerund. In the remaining forms they show stage IIa (ś and ź).

ńeść 'to carry'

1. sg. pres.	ńos-e-$\bar{w}$	imp. 2. sg.	ńeś-Ø-Ø-Ø
pres. part.	-o-nc-Ø	inf.	-Ø-ć
fem. sg. l-form	-Ø-w-a	pers. plu. l-form	-Ø-l-i
gerund	ńuš-Ø-šy	3. sg. pres.	-e-Ø
		past part.	-o-n-y
		verbal noun	-e-ń-e

2.3.7.3 Verbs of the e-class with prethematic t and d show t and d (stage I) in the $\bar{w}$-forms, in the present participle, in the l-form, and in the gerund. They show c and ʒ (stage IIb) in the verbal noun and in the masculine personal nominative plural of the past participle.

Before the infinitive formant ć, t and d are replaced by ś. In the remaining forms ć and ʒ́ (stage IIa) appear.

gńeść 'to squeeze'

1. sg. pres.	gńot-e-w̄	2. sg. imp.	gńec-Ø-Ø-Ø
pres. part	-o-nc-Ø	3. sg. pres.	-e-Ø
fem. sg. l-form	-Ø-w-a	past part.	
gerund	gńut-Ø-šy	m. nom. sg.	-o-n-y
inf.	gńeś-Ø-ć	m. pers. nom. pl.	gńec-e-ń-i
		verbal noun	-e-ń-e

2.3.7.4 Verbs of the e-class with prethematic nasal. These verbs have prethematic w̄ (with its automatic alternant; see "Morphophonemics", 1.3.14 and 1.4.2) in the infinitive-stem forms. In the present-stem forms they have m or n (stage I) in the w̄-forms and present participle and mj or ń (stage II) in the remaining forms, except that m occurs in the imperative as a consequence of automatic morphophonemic principles (see "Morphophonemics", 1.3.5, 1.3.6.1, and 1.3.6.2).

	zajońć 'to occupy'	začońć 'to begin'
1. sg. pres.	za-jm-e-w̄	za-čn-e-w̄
imp. 2. sg.	-Ø-ij-Ø	za-čń-Ø-ij-Ø
3. sg. pres.	za-jmj-e-Ø	-e-Ø
inf.	za-joń-Ø-ć	za-čoń-Ø-ć
fem. sg. l-form	za-je-Ø-w-a	za-če-Ø-w-a
gerund	za-jow̄-Ø-fšy	za-čow̄-Ø-fšy
past part.	za-jen-Ø-t-y	za-čen-Ø-t-y
verbal noun	za-jeń-Ø-ć-e	za-čeń-Ø-ć-e

2.3.7.5 Verbs of the e class with prethematic r (stage I) show ž in the non-w̄ forms of the present tense, in the imperative, and in the infinitive. In the remaining forms they have r.

dž́eć́ 'to tear'

1. sg. pres.	dr-e-w̄	fem. sg. l-form	dar-Ø-w-a
pres. part.	-o-nc-Ø	gerund	-Ø-x̌y
3. sg. pres.	dž́-e-Ø	past part.	-Ø-t-y
2. sg. imp.	-Ø-yj-Ø	verbal noun	-Ø-ć́-e
inf.	-e-ć́		

2.3.7.6 Verbs of the e class with prethematic w. These verbs show w (stage I) in the l-form and the gerund; and in a variant form of the past part. In the remaining forms they show l (stage II). Only two verbs, mleć́ 'to grind' and pleć́ 'to weed' belong to this subclass. The forms given below are those sanctioned by the standard grammars and used in formal speech, but in colloquial speech the stage II prethematic variant has tended to be generalized, so that we encounter such variant forms as imperative ml-e-j-Ø and l-form mjel-i-w-Ø.

mleć́ 'to grind'

1. sg. pres.	mjel-e-w̄	inf.	ml-e-ć́
3. sg. pres.	-e-Ø	masc. sg.	mew-Ø-Ø-Ø
2. sg. imp.	-Ø-Ø-Ø	gerund	-Ø-x̌y
pres. part.	-o-nc-Ø		
past. part.	-o-n-y or mew-Ø-t-y		
verbal noun	-e-ń-e		

2.3.8 Prethematic consonant alternation in verbs of the e/a class. Many verbs of this class show an alternation between the infinitive-stem (before thematic a) and the present-stem (before thematic e ~ o ~ Ø). The infinitive-stem forms show stage I. Prethematic liquids and labials are stage II in the

present-stem (except, of course, that the j after the labials drops in the imperative forms due to the operation of general morphophonemic principles stated in "Morphophonemics" 1.3.5, 1.3.6.1, and 1.3.6.2). Prethematic velars are stage IIa and front consonants stage IIb in the present-stem, excepting that t alternates with č (a regular, but less common alternation t ∽ c also occurs).

	wapać 'to catch'	karać 'to punish'
1. sg. pres.	wapj-e-w̄	kaž-e-w̄
3. sg. pres.	-e-Ø	-e-Ø
2. sg. imp.	(z-)wap-Ø-Ø-Ø	(u-)kaš-Ø-Ø-Ø
inf.	wap-a-ć	kar-a-ć
fem. sg. l-form	-a-w-a	-a-w-a
past part.	(z-)wap-a-n-y	-a-n-y
verbal noun	wap-a-ń-e	-a-ń-e

	pisać 'to write'	šeptać 'to whisper'	pwakać 'to cry'
1. sg. pres.	piš-e-w̄	šepč-e-w̄	pwač-e-w̄
3. sg. pres.	-e-Ø	-e-Ø	-e-Ø
2. sg. imp.	-Ø-Ø-Ø	-Ø-Ø-Ø	-Ø-Ø-Ø
inf.	pis-a-ć	šept-a-ć	pwak-a-ć
fem. sg. l-form	-a-w-a	-a-w-a	-a-w-a
past part.	-a-n-y	-a-n-y	----
verbal noun	-a-ń-e	-a-ń-e	----

In addition to šepč-, the present-stem variant šepc- also exist for šeptać, but is rare. This verb likewise has an imperative variant šeptaj showing the infinitive-stem thematic and prethematic variants. In verbs of this class there are no examples of prethematic n, and only one of prethematic x

(odyxać 'to breathe'). Prethematic v appears in this class in stem-suffixes, where it does not alternate according to the above statements, but with zero as described below in section 2.4.

A limited number of verbs of this class (brać 'to take', prać 'to wash', rvać 'to tear', zvać śę̄ 'to be called', ssać 'to suck', and wgać 'to lie') show a different pattern of alternation. In these verbs we have stage I in the infinitive-stem forms, in the present participle, and in the w̄-forms. In verbs with prethematic v we also have stage I in the imperative forms due to the operation of automatic morphophonemic principles.

In the remaining present-stem forms we have stage II (IIa in the case of verbs with prethematic front and velar consonants). The verb jexać 'to drive', which has an irregular base alternation, also shows this pattern in its present-stem forms. In the case of the verbs wgać and ssać variation according to the pattern described here is standard, but some idiolects show these verbs with w̄-forms of the a-type. The verb wgać may also have prethematic ž̌ (stage II) in all present-stem forms (that is, alternation according to the predominant pattern of e/a-verbs).

	brać 'to take'	rvać 'to tear'
1. sg. pres.	bjor-e-w̄	rv-e-w̄ (rvj-e-w substandard)
pres. part.	-ó-nc-Ø	-o-nc-Ø
3. sg. pres.	bjež̌-e-Ø	rvj-e-Ø
2. sg. imp.	bješ̌-Ø-Ø-Ø	rv-Ø-ij-Ø
inf.	br-a-ć	-a-ć
fem. sg. l-form	-a-w-a	-a-w-a
past part.	-a-n-y	-a-n-y
verbal noun	-a-ń-e	-a-ń-e

2.3.9 Verbs of the e/ě class usually show no prethematic consonant alternation. Some verbs of this class with the base-extension e show a change from stage IIa to IIb in the verbal noun. Thus, from sfrancuźeć 'to become Frenchified' we have sfrancužeńe. But not all e/ě verbs with the base-extension e show this alternation:

wobuźeć 'to become a hooligan', wobuźeńe

The verb vžeć 'to boil' shows no alternation in most idiolects, but may in others show r (stage I) in the w̄-forms and in the present participle. Thus, wr-o-w̄ 'they're boiling'. The verb xćeć 'to want', which has an irregular thematic vowel distribution (e∽a in the infinitive-stem forms and in the imperative, e∽o∽Ø in the remaining present-stem forms), shows xć- (stage IIa) before e∽a but xc (stage IIb) before e∽o∽Ø. Thus, inf. xć-e-ć, 2. sg. imp. xć-e-j-Ø, fem. sg. l-form xć-a-w-a, 1. sg. pres. xc-e-w̄, 3. sg. pres. xc-e-Ø.

2.4 Ster suffixes. These are morphemes which appear before the thematic vowel and after the verb base in some verbs. The following stem-suffixes occur in Polish.

2.4.1 -n/now̄- This suffix occurs only in e-verbs. It has the following allomorphs: n∽ń in the present-stem forms, prethematic n and ń alternating as described in 2.3.7.4 above; ńew̄ in the past participle and verbal noun; and now̄ ∽ new̄ in the remaining infinitive-stem forms, e and o alternating here according to "Morphophonemics" 1.5.2.1.3 (i.e., an (e∽o)w̄[1] alternation). In many verbs this suffix has a defective distribution. In a large number it appears only in the present-stem (as in zostać 'to remain', zostanew̄ 'I shall remain'). In others it appears in the present-stem and in some of the infinitive-stem forms (in such a case always in the infinitive) and is absent in one or more of the remaining infinitive-stem forms. In

a few verbs having this suffix it may be absent in the imperative or other present-stem forms.

	ćongnońć 'to pull'	zostać 'to remain'
1. sg. pres.	ćong-n -e-w̄	zo-sta-n-e-w̄
pres. part.	-n -o-nc-Ø	----
3. sg. pres.	-ń -e-Ø	-ń-e-Ø
2. sg. imp.	-ń -Ø-ij-Ø	-ń-Ø-Ø-Ø
inf.	-noń-Ø-ć	zo-sta- -Ø-ć
1-form 3. sg. masc.	-no -Ø-w-Ø	-Ø-w-Ø
1. sg. masc.	-ne -Ø-w-Ø-em	-Ø-w-Ø-em
3. sg. fem.	-ne -Ø-w-a	-Ø-w-a
gerund	-now-Ø-fšy	-Ø-fšy
past part.	-ńen-Ø-t-y	----
verbal noun	-ńeń-Ø-ć-e	----

2.4.2 -u/ov- This suffix appears only in e/a-verbs. It may appear independently or immediately preceding the suffix -u/yv-. When it appears with -u/yv-, it has the allomorph ov in all forms. When it appears otherwise, it has the allomorph u in the present-stem forms (before thematic e ո o ո Ø) and ov in the infinitive-stem forms (before thematic a). Occasionally -u/ov- marks imperfective aspect in verb pairs (kup-i-š 'you'll buy' versus kup-u-je-š 'you're buying') and is very productive as a derivative suffix making verbs from both native and borrowed roots (brak 'lack, brakovać 'to be lacking'; abonament 'subscription', abonovać 'to subscribe').

budovać 'to build'

3. sg. pres.	bud-u-je-Ø	inf.	bud-ov-a-ć
1. sg. pres.	-u-je-w̄	fem. sg. l-form	-ov-a-w-a
2. sg. imp.	-u-Ø -j-Ø	past part.	-ov-a-n-y
pres. part.	-u-jo-nc-Ø	verbal noun	-ov-a-ń-e

2.4.3 -u/yv- This suffix also appears only in verbs of the e/a type. It usually marks the imperfective member of a verb pair.

vykonyvać 'to finish'

3. sg. pres.	vy-kon-u-je-Ø	inf.	vy-kon-yv-a-ć
1. sg. pres.	-u-je-w	fem. sg. l-form	-yv-a-w-a
pres. part.	-u-jo-nc-Ø	verbal noun	-yv-a-ń-e
2. sg. imp.	-u-Ø -j -Ø		

2.4.4 -v- This suffix has two types of distribution. First, it appears in a few verbs of the e/a type, in which verbs it occurs only before thematic a, being absent before thematic e ∪ o ∪ Ø. Secondly, it appears in a much larger number of a-verbs. There it occurs in all forms. Like -u/yv-, it marks the imperfective members of verb pairs.

	davać 'to give'	dolevać 'to add by pouring'
3. sg. pres.	da-je-Ø	do-le-v-a-Ø
2. sg. imp.	-v-a-j-Ø	-v-a-j-Ø
inf.	-v-a-ć	-v-a-ć
fem. sg. l-form	-v-a-w-a	-v-a-w-a

2.5 Alternation in the verb-base.

2.5.1 Base-extensions. A number of verbs show alternation in their bases, whereby the base has a final vowel in the present-stem forms and lacks this vowel in the infinitive-stem forms. I term this vowel a base-extension. The vowel is either e or o. A fairly large number of verbs of the e/a and e/ě classes have the base-extension e. Two verbs (and their compounds) of the i/a class, stać 'to be standing' and bać śew 'to fear' have the base-extension o. The base-extension o alternates with u (o ∪ u[1] alternation, see "Morphophonemics", 1.5.2.1.3). Thus:

	dolać 'to add by pouring'	istńeć 'to exist'	stać 'to stand'
3. sg. pres.	do-le-je-Ø	istńe-je-Ø	sto-ji-Ø
2. sg. imp.	-Ø -j-Ø	-Ø -j-Ø	stu-Ø -j-Ø
inf.	do-l -a -ć	istń -e -ć	st -a -ć
fem. sg. l-form	-a-w-a	-a-w-a	-a-w-a

2.5.2 Base-vowel alternation. Many Polish verbs show alternation of internal vowels of their bases. These alternations are of the type described in section 1.5.2 of "Morphophonemics". The conditions of their occurrence are stated there.

2.5.2.1 Base-vowel alternation not involving zero.

2.5.2.1.1 o ∽ u[1]. This alternation appears in some i-verbs with u appearing in the imperative forms and o in the remaining forms. It also appears in e-verbs, with u appearing in the infinitive, masc. sg. l-form (except when followed by the copula), gerund, and imperative.

zrobić 'to make, do'		pomuc 'to help'	
inf.	z-rob-i-ć	1. sg. pres.	po-mog-e-w̄
2. sg. imp.	z-rup-Ø-Ø-Ø	3. sg. pres.	po-mož-e-Ø
2 pl. imp.	-Ø-Ø-će	2. sg. imp.	po-muš-Ø-Ø-Ø
		inf.	po-mu -Ø-c
		gerund	po-muk-šy
		l-form 3. sg. masc.	-Ø-Ø-Ø
		1. sg. masc.	po-mog-Ø-w-em
		3. sg. fem.	-Ø-w-a

2.5.2.1.2 e ∽ a. This alternation appears in the verbs leść 'to crawl, walk', jexać 'to ride', and verbs containing the base jd ∽ lez. The latter two verbs show irregular base alternations which will be treated below (2.5.3). In leść the alternation appears only in the infinitive-stem forms, e appearing throughout the present stem, while in jexać the alternation

appears only before the d ⌣ ʒ́ of the present stem. jexać is exemplified in 6.6.3.

znaleśćʹʹ 'to find'

1-form 3. sg. masc. z-na-las--Ø-Ø-Ø

masc. pers. pl. z-na-leźʹ-Ø-l-i

2.5.2.1.3 e⌣(o⌣u). This alternation, representing a combination of e⌣o[2] and o⌣u[1], appears only in certain e-verbs.

ńeśćʹʹ 'to carry'

3. sg. pres.	ńeśʹ-e-Ø	1. sg. pres.	ńos-e-w̄
2. sg. imp.	-Ø-Ø-Ø	pres. part.	-o-nc-Ø
inf.	-Ø-cʹ	1-form 3. sg. fem.	-Ø-w-a
masc. pers. pl. 1-form	-Ø-l-i	1. sg. masc.	-Ø-w-Ø-em
		3. sg. masc.	ńus-Ø-Ø-Ø
		gerund	ńuš̆-Ø-s̆y

2.5.2.1.4 (e⌣o)w̄[1]. This alternation appears in certain e-verbs, including those forms (present-stem) of the verb byćʹ which contain w̄ or its alternants.

č̆s̆owʹ̄śćʹʹ 'to shake'

3. sg. pres.	č̆s̆ewʹ̄s-e-Ø	2. sg. imp.	č̆s̆owʹ̄s-Ø-Ø-Ø
fem. sg. 1-form	č̆s̆ew̄s-Ø-w̄-a	inf.	-Ø-cʹ
past part.	č̆s̆ewʹ̄s-o-n-y	masc. sg. 1-form	č̆s̆ow̄s-Ø-Ø-Ø

2.5.2.2 Base alternations involving zero. In most of these alternations, the base will show a vowel in the present-stem or in the infinitive-stem and no vowel in the other stem. Only in the verbs mleć and pleć and in e-verbs with bases ending in r (2.5.2.2.3 and 2.5.2.2.6 below) does the alternation of vowel and zero not correspond to the division between present and infinitive stem forms.

2.5.2.2.1 e ∽ Ø[1]. This alternation occurs in the verb vźowć 'to take', e occurring in the present-stem, zero in the infinitive stem. Thus, inf. vźow̄-Ø-ć versus 3. sg. pres. veźmj-e-Ø. It also occurs in the verb vjez̀eć 'to know', Ø occurring in the forms of the present tense, excepting the 3. pl., with e in the remaining forms. See 6.2.1 for examples.

2.5.2.2.2 e ∽ Ø[2]. This alternation occurs in the rare e/a-verb swać 'to make (a bed)'. Thus, infinitive sw-a-ć versus 3. sg. pres. śćel-e-Ø.

2.5.2.2.3 a ∽ Ø. This alternation occurs in e-verbs with bases ending in r. In such verbs a occurs in the present-stem forms and in the infinitive, with zero occurring in the remaining infinitive-stem forms. It also occurs in the a-verb dać 'to give', Ø occurring in all forms except the 3. pl. pres., where a occurs. See 6.1.1 and 6.3.2 below for examples.

2.5.2.2.4 (e ∽ o) ∽ Ø. This represents a combination of e ∽ o[2] and e ∽ Ø[2]. It occurs in the e/a-verbs brać 'to take' and prać 'to wash'.

brać 'to take'

1 sg. pres.	bjor-e-w̄	inf.	br-ać
3. sg. pres.	bjež̌-e-Ø	fem. sg. l-form	-a-w-a
2. sg. imp.	bješ̌-Ø-Ø-Ø		

2.5.2.2.5 (e ∽ o)w̄ ∽ Ø[1]. This represents a combination of (e ∽ o)w̄[1] and e ∽ Ø[1] in conjunction with the prethematic alternations of m or n with w̄ described in 2.3.7.4 above. It occurs in e-verbs with bases ending in nasals. Velars preceding the alternating vowel have, of course, a following j before e or o (see "Morphophonemics" 1.3.12 and 1.5.2.1.5).

	dońć 'to blow'	g'ońć 'to bend'
1. sg. pres.	dm -e-w	gn -e-w
3. sg. pres.	dmj-e-Ø	gń -e-Ø
inf.	doń-Ø-ć	g'oń-Ø-ć
masc. sg. l-form	do -Ø-w-Ø	g'o -Ø-w-Ø
fem. sg. l-form	de -Ø-w-a	g'e -Ø-w-a
past part.	den-Ø-t-y	g'en-Ø-t-y
verbal noun	deń-Ø-ć-e	g'eń-Ø-ć-e

2.5.2.2.5 (e ∽ o)w̄ ∽ Ø². This is the same alternation as the foregoing, with the addition of an alternation of the consonant preceding the alternating vowel, stage I appearing before zero and stage II (IIa in the case of front consonants) before e and o. It represents therefore a combination of (e ∽ o)w̄¹ and e ∽ Ø².

ćońć 'to cut'

1. sg. pres.	tn-e-w̄	inf.	ćoń-Ø-ć
3. sg. pres.	tń-e-Ø	past part.	ćen-Ø-t-y
masc. sg. l-form	ćo-Ø-w-Ø	verbal noun	ćeń-Ø-ć-e
fem. sg. l-form	će-Ø-w-a		

2.5.2.2.6 e ∽ Ø² plus e ∽ Ø². This alternation, where we have e alternating with zero, the consonant preceding the alternation being stage I before zero and before some occurrences of e and stage II before the remaining occurrences of e, occurs in two e-verbs, mleć 'to grind' and plec 'to weed', whose bases end in l.

These verbs have zero in the infinitive, e preceded by stage I in the l-form and gerund, and e preceded by stage II in the remaining forms. Forming a small isolated subgroup and being of relatively rare occurrence (at least in the speech of city dwellers, who are the bulk of those who habitually speak standard Polish, the peasant speaking other dialects), these

verbs tend to be assimilated to more frequently occurring patterns in colloquial speech, stage II replacing stage I before the e in the l-form (the gerund is not used in colloquial speech), thus making this alternation a case of simple e ∽ ∅[2]. Examples of the forms of mleć may be found in section 6.3.3 below.

2.5.2.2.7 (e∽a)∽ ∅. This alternation occurs in the ě/e-verb jeść 'to eat', ∅ occurring in the present tense forms, excepting the 3. pl., e occurring in the remaining present-stem forms, and e∽a in the infinitive-stem forms, e and a alternating according to the conditions listed in "Morphophonemics" 1.5.2.1.2. For examples see 6.8 below.

2.5.3 Irregular alternation of the verb-base. A small number of Polish verbs show alternations in the verb-base not covered by morphophonemic statements valid for other Polish morphemes. I term such alternations irregular. Verbs showing irregular base alternation are listed below, and examples are given in secion 6.

2.5.3.1 The e-verb iść 'to go (under one's own power)' and its compounds show the following base-variants: id- (-jd- in compounds) with the prethematic consonant alternations characteristic of e-verbs with base-final d in the present-stem forms and in the infinitive, š- before the l-formant followed by a vocalic ending (i.e., in all l-forms except the masc. sg.), šed- in the remaining infinitive-stem forms (masc. sg. l-form and gerund). The two latter variants show the alternations d∽∅ conditioned by e ∽ ∅[1] which also occur in the present stem of jeść and vjezdzić.

2.5.3.2 Verbs of the e class with bases consisting of na- plus jd ∽ lez show na-jd- with the prethematic consonant alternations characteristic of e-verbs with base-final d in the present stem and na-lez with e∽a base-

vowel alternation conditioned by the prethematic consonant alternations characteristic of e-verbs with base-final z in infinitive-stem.

2.5.3.3 The e-verb vźońć 'to take' shows the alternations characteristic of e-verbs ending in nasals as well as the e ∽ ∅[1] alternation already mentioned (2.5.2.2.1). In addition the imperative shows the truncated base-variant veź (loss of m, substitutive softening of z).

Those speakers who have the infinitive vźow̄ść also have a base-variant vźow̄ś- in the infinitive instead of vźow̄ć.

2.5.3.4 The e-verb śow̄ść 'to sit down' shows the base śond- with the usual prethematic consonant alternations characteristic of verbs of its class in the present-stem forms and in the infinitive. In the remaining infinitive-stem forms the variant śed with e∽a alternation of the base-vowel occurs.

2.5.3.5 The e-verb być 'to be' has the base-variant bend- with the usual prethematic consonant changes characteristic of verbs of its class and the base-vowel alternation (e∽o)w̄[1] in the present-stem, and the base variant by- in the infinitive-stem.

The verb być is anomalous in that in addition to the forms occurring in the other verbs it has certain additional forms made by the addition of the copula forms to the base-variants jest-, sow̄- and by-.

The forms of the copula will be described below.

2.5.3.6 The e/a verb jexać 'to ride, travel' shows the base-variant jed- with the prethematic consonant alternation and e∽a alternation described above in the present-stem and the root-variant jex- in the infinitive-stem.

2.5.4 Morphemic status of the verb-base.

The individual verb bases (or their variants, if there is variation between the bases of the various forms of a given verb) represent allomorphs

of morphemes comprising the several bases of distributionally established families of words which turn out to be related in meaning. I call such morphemes verb roots.[2] An example of variation in a verb root: vjeś-Ø-ć 'to haul, convey' voź-ić 'to haul repeatedly' pšy-voź-i-ć 'to import' vus-Ø 'wagon' voz-u 'of a wagon'.

Verb roots have morphemic status in that their allomorphs (individual bases and base variants) are complementarily distibuted and in that they contrast with the allomorphs of the other verb roots.

3.0 Endings. Polish verb forms show one of two kinds of endings, that is, their endings are either verbal or nominal. Nominal endings are those of the verbal noun, which are identical with the endings of the soft-stem neuter noun, those of the present participle, which are identical with the adjective endings, those of the past participle, which are identical also with the adjective endings, and those of the l-form, which are identical with the nominative endings of the third person pronoun on.[3]

As the description of these endings is the province of nominal rather than verbal morphology, they will not be treated further in this study. There are six verbal endings, which occur in various allomorphs. All six occur in the present tense. Only three occur in the imperative forms. All six also occur in the forms of the copula, which are not endings but enclitics occurring in conjunction with nominal forms.

A construction consisting of substantive plus copula is the syntactic equivalent of a verb form. The copula occurs with certain verb forms, notably the l-form. Verb forms with which the copula occurs are, of course, verb forms which have a syntactically substantival function.

The verb endings and copula forms are given in the table below. Each item in the table is an allomorph and all allomorphs in each horizontal row form a separate morpheme.[4]

	Present tense: stems ending in thematic		Imperative	Copula: after	
	a, e∽a	e∽o∽Ø, i		vowel	consonant
1. sg.	-m	-w̄	---	-m	-em
3. pl.	-jow̄	-w̄	---	-Ø	-Ø
3. sg.	-Ø	-Ø	---	-Ø	-Ø
2. sg.	-š̌	-š̌	-Ø	-ś	-eś
1. pl.	-my	-my	-my	-śmy	-eśmy
2. pl.	-ć́e	-ć́e	-ć́e	-śće	-eśće

If we examine the variants of the individual endings, we note a number of common morphophonemic variations. Thus, between the postconsonantal and postvocalic copula forms we have the variation e ∽ Ø (except in 3. sg. and pl.). In the 1. sg. we have the alternation m ∽ w. In the present tense forms of the 3. pl. ending we have the alternation o ∽ Ø and in addition the automatic prefixation of j occurring when an inflexional element beginning with a vowel follows an element ending in a vowel. The alternation of ś and š̌ in the 2. sg. is a stage IIa-IIb alternation. Examples of the endings in present tense forms:

	swuxać́ 'to listen'	śmjeć́ 'to dare'	myć́ 'to wash'	broń́ić́ 'to defend'
1. sg.	swux-a-m	śmj-e-m	my-je-w̄	broń-e-w̄
2. sg.	-a-š̌	-e-š̌	-je-š̌	-i-š̌
3. sg.	-a-Ø	-e-Ø	-je-Ø	-i-Ø
1. pl.	-a-my	-e-my	-je-my	-i-my
2. pl.	-a-ć́e	-e-ć́e	-je-ć́e	-i-ć́e
3. pl.	-a-jow̄	-e-jow̄	-jo-w̄	-o-w̄

Examples of the endings in imperative forms:

2. sg.	swux-a-j-Ø	śmj-e-j-Ø	my-Ø-j-Ø	broń-Ø-Ø-Ø
2. pl.	-a-j-ć́e	-e-j-ć́e	-Ø-j-ć́e	-Ø-Ø-ć́e
1. pl.	-a-j-my	-e-j-my	-Ø-j-my	-Ø-Ø-my

Examples of the copula attached to the l-form (fem. sg. and non-pers. pl.) and to an anomalous stem of być 'to be':

1. sg.	swux-a-w-a-m	jest-em
2. sg.	-a-w-a-ś	-eś
3. sg.	-a-w-a-Ø	-Ø
1. pl.	-a-w-y-śmy	-eśmy
2. pl.	-a-w-y-śće	-eśće
3. pl.	-a-w-y-Ø	sow-Ø

4.0 Formants. The formants listed below occur in Polish verbs.

4.1 Imperative formant. This formant has the following allomorphs: After a stem ending in a vowel, -j-; after a stem ending in a consonant preceded by a vowel, zero; after a stem ending in a consonant cluster, -ij- alternating with -yj- after retracted consonants. In this formant we have the alternation j ∽ Ø, which usually appears in root-morphemes (see "Morphophonemics" 1.5.2.2.1) and the alternation i ∽ y, a general morphophonemic alternation conditioned by the preceding consonant. Examples of this formant in the 2. sg. imp. of the verbs swuchać 'to listen', bronić 'to defend', myć 'to wash', spać 'to sleep', and dżeć 'to tear' appear below:

swux-a-j-Ø, broń-Ø-Ø-Ø, my-Ø-j-Ø, śp-Ø-ij-Ø, dž-Ø-yj-Ø

4.2 Present participle formant. This formant has the allomorph -nc- after thematic o and -jonc- otherwise (after thematic e and a). The alternations (o ∽ Ø, prefixation of j) are the same as in the 3. pl. pres. ending.[5]

Examples: swux-a-jonc-Ø, śmj-e-jonc-Ø, broń-o-nc-Ø, my-jo-nc-Ø.

4.3 Infinitive formant. This formant is -ć. When it is attached to stems ending in k or g, k or g are replaced by zero and ć by c (see "Morphophonemics" 2.1.2.2.4). Examples: swux-a-ć, śmj-e-ć, broń-ić, my-Ø-ć, pje-Ø-c.

4.4 l-formant. This formant is -w-, with the stage II variant -l- before the masculine personal plural ending i (a change characteristic of adjective stems) and the variant zero, when it follows a stem ending in a consonant and is not followed by a vowel, as semivowels do not appear in Polish in the positions C_C or C_# (see "Morphophonemics" 1.3.7.1). Examples from swuxać 'to listen' and vieść 'to convey':

masc. sg.	swux-a-w-Ø	vjus-Ø-Ø-Ø
neut. sg.	-a-w-o	vjoz-Ø-w-o
fem. sg.	-a-w-a	-Ø-w-a
masc. pers. pl.	-a-l-i	vjeź-Ø-l-i
non-pers. pl.	-a-w-y	vjoz-Ø-w-y

4.5 Gerund formant. This formant has the allomorph -fšy after stems ending in a vowel or in w̄ and -šy after stems ending in consonants.[6] Examples: swux-a-fšy, za-čow̄-Ø-fšy, vjuš-Ø-šy, mew-Ø-šy

4.6 Past participle formant. This formant has the following allomorphs: t͡ɕ after stems ending in thematic zero preceded by nasal consonant, r, or any vowel but a, n͡ɲ after stems ending in thematic vowels other than zero or in thematic zero preceded by a. The stage II consonants ć and ń occur before the masculine personal nominative plural ending i, t and n (stage I) appearing before the remaining endings, an alternation common to adjective stems.

za-jen-Ø-t-y	za-jeń-Ø-ć-i	'occupied'
my-Ø-t-y	my-Ø-ć-i	'washed'
ze-psu-Ø-t-y	ze-psu-Ø-ć-i	'spoiled'
broń-o-n-y	broń-e-ń-i	'defended'
kox-a-n-y	kox-a-ń-i	'beloved'

4.7 Verbal noun formant. This formant has the allomorphs ć and ń, which alternate under the same conditions as the allomorphs of the past participle formant.

za-jeń-Ø-ć-e	'occupation, seizure'
my-Ø-ć-e	'washing'
ze-psu-Ø-ć-e	'spoiling'
broń-e-ń-e	'defending'
kox-a-ń-e	'loving'

5.0 Composition of verb forms. The Polish conjugation comprises the following forms:

Present-stem forms

present tense forms (singular and plural, three persons each)

imperative forms (second person singular, first and second plural)

present participle (all the forms of the adjective declension)

Infinitive-stem forms

infinitive (one form only)

l-forms (five forms for three genders in singular, two in plural)

gerund (one form only)

past participle (all the forms of the adjective declension)

verbal noun (all the forms of the noun declension)

We have seen above that it is often convenient for ease of description to divide the present tense forms into $\underline{\bar{w}}$-forms and non-$\underline{\bar{w}}$-forms (first person singular and third person plural being $\underline{\bar{w}}$-forms, the others non-$\underline{\bar{w}}$).

Naturally, not all Polish verbs show all the above forms. The verbal noun and present participle occur chiefly in imperfective verbs, while the gerund and past participle occur chiefly in perfective verbs.[7] Some verbs lack both past participle and verbal noun.

Others lack an imperative. The above scheme represents a maximum array of forms. One verb (<u>być</u> 'to be') is anomalous in that it has two sets of forms not included in the above scheme. These two sets of forms consist of the bases <u>jest</u>, <u>$\bar{s}$ow</u> and <u>by</u> to which the copula forms are added.

In regard to their structure the forms of the Polish conjugation fall into three types: stem plus ending (present tense), stem plus formant (infinitive and gerund), stem plus formant plus ending (imperative, present participle, <u>l</u>-form, past participle, and verbal noun).

For purposes of syntactic analysis it would be necessary to divide the verb forms into true verb forms (present tense, imperative), quasi-nominal forms (infinitive, <u>l</u>-form, anomalous forms of <u>być</u>), nominal forms (substantival: verbal noun, adjectival: present and past participles), and an adverbial form (gerund).

6.0 Illustrative tables. Below are given in tabular form examples of characteristic verbs of each verb class. The following forms are given in the following order:

1. sg. pres. (illustrative of present tense w̄-forms)

3. sg. pres. (illustrative of non-w̄-forms)

2. sg. pres. (illustrative of imperative forms)

pres. part. masc. nom. sg. short form (illustrative of present participle forms)

infinitive

l-forms (fem. sg., if there is no stem variation in the l-forms. In those verbs which have stem variation in the l-forms, chiefly verbs of the ě class, the masc. sg. and masc. pers. pl. are given as well)

gerund

past part. masc. nom. sg. (illustrative of past participle forms)

verbal noun nom. sg. (illustrative of verbal noun forms)

If forms other than those listed are given for any verb, they will be indicated by an abbreviation placed after them.

Where a given verb does not have one of the above listed forms, its absence will be indicated by a series of dashes. Other conventions adhered to in examples given earlier in this study will continue to be observed.

6.1 a-verbs swuxać́ 'to listen' swux-a-m	6.1.1 a-verb dać́ 'to give' d-a-m (3. pl. pres. da_3-o-w̃)	6.2 ě-verbs śmjeć́ 'to dare' śmj-e-m
-a-Ø	-a-Ø	-e-Ø
-a-j-Ø	-a-j-Ø	-e-j-Ø
-a-jonc-Ø	-----	-e-jonc-Ø
-a-ć́	-a-ć́	-e-ć́
-a-w-a	-a-w-a	-a-w-Ø
-a-fšy	-a-fšy	-a-w-a
-a-n-y	-a-n-y	-e-l-i
-a-ń-e	-a-ń-e	-----

6.2.1 ě-verb
vje$_3$eć 'to know'

vj-e-m (3. pl. pres. vje$_3$-o-w̄)
-e-Ø
vjec-Ø-Ø-Ø
vje$_3$-o-nc-Ø
vje$_3$-e-ć
-a-w-Ø
-a-w-a
-e-l-i
(po-vje$_3$-a-fšy)
(-a-n-y
vje$_3$-e-ń-e

6.3.1 e-verbs
(base-final vowel)
myć 'to wash'

my-je-w̄
-je-Ø
-Ø-j-Ø
-jo-nc-Ø
-Ø-ć
-Ø-w-a
-Ø-fšy
-Ø-t-y
-Ø-ć-e

6.3.2 e-verbs
(base-final r)
džeć 'to tear'

dr-e-w̄
dž-e-Ø
-Ø-yj-Ø
dr-o-nc-Ø
dž-e-ć
dar-Ø-w-a

-Ø-t-y
-Ø-ć-e

6.3.3 e-verbs
(base-final w)
mleć 'to grind'

mjel-e-w̄
-e-Ø
-Ø-Ø-Ø
-o-nc-Ø
ml -e-ć
mew -Ø-w-a
-Ø-šy
mjel-o-n-y
mjel-e-ń-e

6.3.4.1 e-verbs
(base-final m)
zajońć 'to occupy'

za-jm -e-w̄
-jmj-e-Ø
-jm -Ø-ij-Ø

-joń-Ø-ć
-jo -Ø-w-Ø
-je -Ø-w-a
-Ø-l-i
-jow̄-Ø-fšy
-jen-Ø-t-y
-jeń-Ø-ć-e

6.3.4.2 e-verbs (base-final n)

začońć 'to begin'
za-čn -e-w̄

-čń -e-Ø

-Ø-ij-Ø

-čoń-Ø-ć

-čo -Ø-w-Ø

-če -Ø-w-a

-Ø-l-i

-čow̄-Ø-fšy

-čen-Ø-t-y

-čeń-Ø-ć-e

6.3.4.3 e-verbs (suffix -n/now̄-)

congnońć 'to pull'
cong-n-e-w̄

-ń-e-Ø

-ń-Ø-ij-Ø

-n-o-nc-Ø

-noń-Ø-ć

-no -Ø-w-Ø

-ne -Ø-w-a

-ne -Ø-l-i

-now̄-Ø-fšy

-ńen-Ø-t-y

-ńeń-Ø-ć-e

zostać 'to remain'
zo-sta-n-e-w̄

-ń-e-Ø

-ń-Ø-Ø-Ø

-Ø-ć

-Ø-w-a

-Ø-fšy

6.3.5.1 e-verbs (base-final s or z)

vješć 'to convey by vehicle'
vjoz-e-w̄

vjeź-e-Ø

vjeś-Ø-Ø-Ø

vjoz-o-nc-Ø

vjeś-Ø-ć

vjus-Ø-Ø-Ø

vjoz-Ø-w-a

vjeź-Ø-l-i

vjuš-Ø-šy

vjeź-o-n-y

vjeź-e-ń-e

6.3.5.2 e-verbs (base-final t or d)

vješć 'to lead'
vjod-e-w̄

vjeʒ-e-Ø

vjeć-Ø-Ø-Ø

vjod-o-nc-Ø

vjeś-Ø-ć

vjut-Ø-Ø-Ø

vjod-Ø-w-a

vjed-Ø-l-i

vjut-Ø-šy

vjeʒ-o-n-y

-e-ń-e

6.3.6 e-verbs (base-final k or g)

stšyc 'to shear, cut hair'
stšyg-e-w̄

stšyž-e-Ø

stšyš-Ø-Ø-Ø

stšyg-o-nc-Ø

stšy -Ø-c

stšyg-Ø-w-a

stšyk-Ø-šy

stšyž-o-n-y

-e-ń-e

6.3.7 e-verb (anomalous)	6.4 i-verbs	
być 'to be'	broníć 'to defend'	žučyć 'to throw'
bend-e-w̄	bron-e-w̄	žuč-e-w̄
benj-e-Ø	-i-Ø	-y-Ø
bonc-Ø-Ø-Ø	-Ø-Ø-Ø	-Ø-Ø-Ø
bend-o-nc-Ø	-o-nc-Ø	-o-nc-Ø
by -Ø-ć	-i-ć	-y-ć
-Ø-w-a	-i-w-a	-y-w-a
-Ø-fšy	-i-fšy	-y-fšy
-----	-o-n-y	-o-n-y
-Ø-ć-e	-e-ń-e	-e-ń-e

(plus: jest-em, jest-eś . . . . so-w̄, and by-m, by-ś, etc.)

6.4 i-verbs		6.5 a/ě-verb
prosić 'to beg, request'	zrobić 'to make, do'	mjeć 'to have'
proš-e-w̄	z-robj-e-w̄	m-a-m
pros-i-Ø	z-rob -i-Ø	-a-Ø
-Ø-Ø-Ø	z-rup -Ø-Ø-Ø	mj-e-j-Ø
proš-o-nc-Ø	(robj-)o-nc-Ø	m-a-jonc-Ø
pros-i-ć	z-rob -i-ć	mj-e-ć
-i-w-a	-i-w-a	-a-w-Ø
(po-)pros-i-fšy	-i-fšy	-a-w-a
proš-o-n-y	z-robj-o-n-y	-e-l-i
-e-ń-e	-e-ń-e	-----

		-e-ń-e

6.6 e/a-verbs

pisać 'to write'	brać 'to take'
piš-e-w̄	bjor-e-w̄
-e-Ø	bjež-e-Ø
-Ø-Ø-Ø	bješ-Ø-Ø-Ø
-o-nc-Ø	bjor-o-nc-Ø
pis-a-ć	br -a-ć
-a-w-a	-a-w-a
(na-pis-a-fšy)	(vy-br-a-fšy)
pis-a-n-y	br-a-n-y
-a-ń-e	-a-ń-e

6.6.1 e/a-verbs (with stem-suffixes)

ʒenkovać 'to thank'
ʒenk-u-je-w̄
-u-je-Ø
-u-Ø-j-Ø
-u-jo-nc-Ø
ʒenk-ov-a-ć
-ov-a-w-a
(po-ʒenk-ov-a-fšy)
(-ov-a-n-y)
ʒenk-ov-a-ń-e

6.6.1 e/a-verbs

vykonyvać 'to finish'	davać 'to give'
vy-kon-u-je-w̄	da-je-w̄
-u-je-Ø	-je-Ø
-u-Ø-j-Ø	-v-a-j-Ø
-u-jo-nc-Ø	-jo-nc-Ø
-yv-a-ć	-v-a-ć
-yv-a-w-a	-v-a-w-a-
-----	-----
-yv-a-n-y	-v-a-n-y
-yv-a-ń-e	-v-a-ń-e

6.6.2 e/a-verbs (with base-extension)

dolać 'to add by pouring'
do-le-je-w̄
-je-Ø
-Ø-j-Ø
(le-jo-nc-Ø)
do-l-a-ć
-l-a-w-a
-a-fšy
-a-n-y
-a-ń-e

6.6.3 e/a-verb (irreg.)
jexać 'to ride, go by vehicle'

jad-e-w̄
jeʒ́-e-Ø
jeć́-Ø-Ø-Ø
jad-o-nc-Ø
jex-a-ć́
-a-w-a

6.7 e/ě-verbs
vžeć 'to boil'

vr-e-w̄
-e-Ø
-Ø-yj-Ø
-o-nc-Ø or vr-o-nc-Ø
-e-ć́
-a-w-Ø
-a-w-a
-e-l-i

-e-ń-e

6.7.1 e/ě-verbs
(with base-extension)
zemdleć 'to faint'

ze-mdle-je-w̄
-je-Ø
(mdle-Ø-j-Ø)
(-jo-nc-Ø)
ze-mdl -e-ć́
-a-w-Ø
-a-w-a
-e-l-i
-a-fšy
-o-n-y
-e-ń-e

6.7.2 e/ě-verb
(irreg.)
xćeć 'to wish, want'

xc-e-w̄
-e-Ø
xć́-e-j-Ø
xc-o-nc-Ø
xć́-e-ć́
-a-w-Ø
-a-w-a
-e-l-i

-a-n-y
-e-ń-e

6.8 ě/e-verb
jeść́ 'to eat'

j-e-m (3. pl. pres. jeʒ-o-w̄)
-e-Ø
jec-Ø-Ø-Ø
jeʒ-o-nc-Ø
jeś́-Ø-ć́
jat-Ø-Ø-Ø
jaḍ-Ø-w-a
jed-Ø-l-i
(z-jat-Ø-šy)
jeʒ-o-n-y
-e-ń-e

6.9 i/a-verb

spać 'to sleep'

śpj-e-w̄

śp -i-Ø

-Ø-ij-Ø

śpj-o-nc-Ø

sp -a-ć

-a-w-a

(za-sp-a-fšy)

(-a-n-y)

sp -a-ń-e

6.9.1 i/a-verb (with base-extension)

stać 'to be standing'

sto-je-w̄

-ji-Ø

stu-Ø-j-Ø

sto-jo-nc-Ø

st -a-ć

-a-w-a

-a-n-o (neut. sg. nom. short form)

-a-ń-e

6.10 i/ě-verbs

swyšeć 'to hear'

swyš-e-w̄

-y-Ø

-o-nc-Ø

-e-ć

-a-w-Ø

-a-w-a

-e-l-i

-a-fšy

-a-n-y

-e-ń-e

6.10 i/ě-verbs (base-final front consonant)

viʒeć 'to see'

viʒ-e-w̄

viʒ-i-Ø

----

viʒ-o-nc-Ø

viʒ-e-ć

-a-w-Ø

-a-w-a

-e-l-i

-a-fšy

-a-n-y

-a-ń-i (masc. pers. nom. pl.)

viʒ-e-ń-e

6.10.2 i/ě-verbs (base-final labial consonant)

lubić 'to love'

lubj-e-w̄

lub -i-Ø

lup -Ø-Ø-Ø

lubj-o-nc-Ø

-i-ć

-a-w-Ø

-a-w-a

-i-l-i

-a-n-y

-e-ń-e

6.10.3 i/ě-verbs (base-final n)

zapomnieć 'to remember'

zapomn-e-w̄

zapomń-i-Ø

-Ø-ij-Ø

za pomń-e-ć

-a-w-Ø

-a-w-a

-e-l-i

(za-pomń-a-fšy)

(-a-n-y)

-e-ń-e

IV

THE POLISH VERB

(part 2--interparadigmatic alternations)

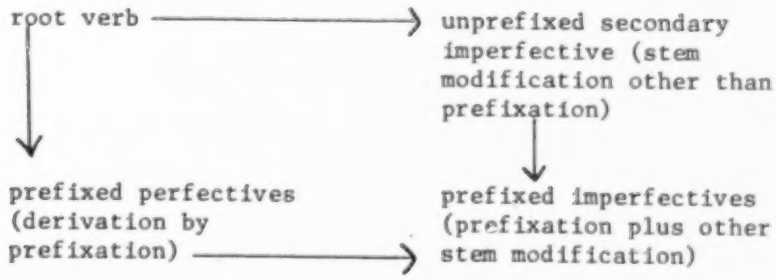
1.0 In Polish, as in all Slavic languages, the category of aspect is fundamental in the verbal system. A given verb belongs to one of two aspect categories, traditionally called perfective and imperfective. It is possible to assign a verb to one or the other of these categories by syntactic criteria, for there are syntactic frames where only imperfective verbs occur. Thus, in Polish, any verb which occurs in a periphrastic construction with the present tense of the verb <u>być</u> as auxiliary (e.g. <u>będę pić</u> or <u>będę piw</u> 'I'll be drinking') is imperfective. Any verb which cannot so occur is perfective.[8] Accompanying the dichotomy perfective-imperfective, which can be defined, as above, in purely formal terms, is a semantic distinction. Imperfective verbs describe an action or situation as an ongoing process and are noncommittal as to its beginning or ending, while perfective verbs describe an action or process as a finite unit, bounded at some point in time. Corollary to this, imperfective verbs usually represent an action as incomplete, in progress, or sometimes as habitual or repetitive, while perfective verbs usually represent an action as complete, accomplished (the so-called inceptive verbs represent the beginning of an action as completed and marked off in time). The present tense of a perfective verb in Polish has a future meaning, that is, it describes an action or process as taking place and terminating in the future.[9] Only the imperfective verb can be used with present meaning.

While isolated imperfective and perfective verbs occur (imperfective much more frequently than perfective), Polish verbs usually occur in pairs with essentially the same lexical meaning, but with the semantic distinction described above. Both members of a perfective-imperfective pair (aspect pair) usually have the same morpheme as their base. A morpheme serving as base for more than one verb will hereafter be called a verbal root morpheme or simply root. All verbs which have the same root I term a verb family. A very small number of verb families include aspect pairs whose members do not share the same root. A verb family almost always contains an unprefixed verb, which is also usually unsuffixed.

I term this verb the root verb. If there is more than one unprefixed verb in the family, the verb without suffix is the root verb. If there is more than one unprefixed and unsuffixed verb in the family, the verb in which the root shows fewest morphophonemic alternations from its shape in other words in which it occurs is the root verb. The root verb is with few exceptions imperfective. It is typically accompanied by one or more prefixed verbs with no other alternation of the stem but prefixation, which are perfective. One of these prefixed perfectives may be the perfective counterpart of the root verb.

Forming aspect pairs with the remaining prefixed perfectives will be a number of verbs with the same prefixes but with some further modification of the stem (suffixation, morphophonemic vowel class). These I term prefixed imperfectives. Besides the root verb there may be another unprefixed imperfective showing the same modification of the stem as the prefixed imperfectives. This I term the unprefixed secondary imperfective. In some cases it carries a different shade of meaning from the root verb, implying habitual, continuous, or repetitive (whether sporadic or regular)

action. In other cases, it seems to be nearly or completely synonymous with the root verb. The pattern of derivation of a typical Polish verb family is:


root verb
unprefixed secondary imperfective (stem modification other than prefixation)
prefixed perfectives (derivation by prefixation)
prefixed imperfectives (prefixation plus other stem modification)

2.0 List of verb family types.

Below I shall list the various types of verb families occurring in my material (which I believe to cover substantially the entire Polish verb system). In the formulaic diagrams the following symbols are used: I = imperfective, P = perfective, S = the stem containing the simplest form of the root without suffixes (normally the stem as appearing in the root verb), p = prefix, n = the suffix -n/nów, m = modification of the stem other than prefixation or addition of -n/nów-. Thus pSm indicates modification of the stem occurring in the root verb through prefixation plus some other modification. A superscript numeral indicates that the particular constellation of elements indicated by the formula occurs in a number of verbs equal to the value of the numeral. Superscript ∞ indicates that that constellation occurs in an undefined number of verbs. Subscript numerals, when they occur, indicate an additional modification of the same type as indicated by a previous formula. Thus, occurrence of pS, pSm_1 and pSm_2 indicate that besides prefixation the stem is modified in two additional and different ways.

2.1 Root verb imperfective.

2.1.1 Perhaps the simplest type of verb family consists of a root verb plus one or more prefixed perfectives. If there is only one prefixed

perfective, it is the perfective counterpart of the root verb. If there is more than one, each prefixed perfective will have a slightly different nuance of meaning and the root verb will be imperfective counterpart of all of them. Examples:

I	P	
S	pS	
abon-ov-a-ć́	za-abon-ov-a-ć́	'to subscribe'
S	pS^{oo}	
telefon-ov-a-ć́	za-telefon-ov-a-ć́	'to telephone'
	po-telefon-ov-a-ć́	'to telephone'
	ot-telefon-ov-a-ć́	'to call back'
	s-telefon-ov-a-ć́	'to get in touch by telephone'

2.2.2 One of the family types occurring most frequently consists of a root verb plus a number of prefixed perfectives and imperfectives. The root verb may or may not have a prefixed perfective counterpart. If it does, that prefixed perfective will not, of course, have a prefixed imperfective counterpart. Examples:

I	I	I	
S	pS		
	pS^{oo}	pSm^{oo}	
proś́-i-ć́	po-proś́-i-ć́		'to beg, ask'
	pše-proś́-i-ć́	pše-praš́-a-ć́	'to beg pardon'
	za-proś́-i-ć́	za-praš́-a-ć́	'to invite'
	u-proś́-i-ć́	u-praš́-a-ć́	'to request'
	vy-proś́-i-ć́	vy-praš́-a-ć́	'to ask (one) to leave'
	s-proś́-i-ć́	s-praš́-a-ć́	'to invite many persons'
	f-proś́-i-ć́	f-praš́-a-ć́	'to invite (oneself)'

S	pS$^{\infty}$	pSm$^{\infty}$	
mu-Ø-c			'to be able'
	po-mu-Ø-c	po-mag-a-ć	'to help'
	vy-mu-Ø-c	vy-mag-a-ć	'to demand'
	pše-mu-Ø-c	pše-mag-a-ć	'to conquer'

The foregoing are common verb family types. The remaining types in this section (2.1) have but a few members each.

2.1.2.1 A variant of the preceding type has two or more prefixed perfectives corresponding to the root verb and one or more prefixed perfectives with prefixed imperfective counterparts.

I	P	I	
S			
	pS$^{\infty}$	pSm$^{\infty}$	
žu-Ø-ć	po-žu-Ø-ć		'to chew'
	ž-žu-Ø-ć		'to chew up'
	pše-žu-Ø-ć	pše-žu-v-a-ć	'to chew up'

2.1.2.2 A further variant has a prefixed perfective counterpart to the root verb and a number of prefixed imperfectives with stem modification showing no perfective counterparts.

I	P	I	
S	pS		
		pSm^{oo}	
pj-a-ć (pres. pje-je-$\overline{w}$)	za-pj-a-ć		'to crow'
		o-pje-v-a-ć	'to sing of'
		ś-pje-v-a-ć	'to sing'

2.1.3 The prefixed perfectives may show a stem modification and the prefixed imperfectives a further modification.

I	P	I	
S			
	pSm_1^{oo}	pSm_2^{oo}	
muś-e-ć́			'must (inf.)'
	vy-muś-i-ć́	vy-muš-a-ć́	'to compel, extort'
	z-muś-i-ć́	z-muš-a-ć́	'to compel'
	pšy-muś-i-ć́	pšy-muš-a-ć́	'to compel'

2.1.4 The root verb <u>vjeʒeć́</u> 'to know' has a family containing a number of prefixed perfectives, one of which has a prefixed imperfective counterpart which shows a stem modification different from the others. A prefixed imperfective with no perfective counterpart also exists showing the second stem modification, and in addition there is a perfective-imperfective pair showing a third and a fourth stem modification.

I	P	I	I	P	I
S					
	pS^{oo}	pSm_1^{oo}	pSm_2^{oo}		
				pSm_3	pSm_4
vjeʒ-e-ć́					'to know'
	po-vjeʒ-e-ć́	po-vjad-a-ć́			'to tell, order'
	do-vjeʒ-e-ć́ (etc.)		do-vjad-yv-a-ć́		'to find out'
			za-vjad-yv-a-ć́		'to manage'
				z-vjeʒ-i-ć́	z-vjeʒ-a-ć́ 'to visit'

2.1.5 There are a few verb families which are essentially of the same type as 2.1.2, but with the addition of an unprefixed secondary imperfective. In verb families of this type the unprefixed secondary imperfective connotes repetitive or habitual performance of an action.

I S	I Sm	P pS^{oo}	I pSm^{oo}	
muv-i-ć	mavj-a-ć			
		po-muv-i-ć	po-mavj-a-ć	'to discuss'
		v-muv-i-ć	v-mavj-a-ć	'to persuade'
		o-muv-i-ć	o-mavj-a-ć	'to discuss'
		od-muv-i-ć	od-mavj-a-ć	'to refuse'
		za-muv-i-ć etc.	za-mavj-a-ć etc.	'to order'

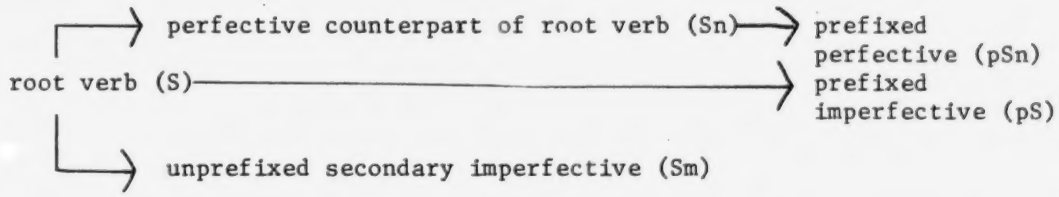
I S	I Sm	P pS pS^{oo}	I pSm^{oo}	
pis-a-ć	pis-yv-a-ć	na-pis-a-ć		'to write'
		s-pis-a-ć	s-pis-yv-a-ć	'to list'
		o-pis-a-ć	o-pis-yv-a-ć	'to describe'
		f-pis-a-ć etc.	f-pis-yv-a-ć etc.	'to write in'

2.1.5.1 The family of the root verb <u>leže</u>ć 'to lie' presents a variant of the foregoing type in that two of its pS verbs are imperfective, rather than perfective, and have no perfective counterparts.

I	I	P	I	I	
S	Sm				
		pS∞		pSm∞	
			pS∞		
lež-e-ć	leg-iv-a-ć				'to lie'
		po-lež-e-ć		po-leg-iv-a-ć	'to lie a while'
		vy-lež-e-ć etc.		vy-leg-iv-a-ć	'to lie enough'
			na-lež-e-ć		'to belong'
			za-lež-e-ć		'to depend'

2.2 Root verb imperfective; some verbs of the family show the suffix -n/nō̄-.

In a fairly large number of verb families, one or more verbs of the family contain the suffix -n/nō̄-. Though, like prefixation, this suffix of itself does not indicate a perfective verb, when only one member of an aspect pair contains it, then that member is the perfective member. In families where this suffix plays a role, the perfective counterpart of the root verb will be unprefixed, but will contain the suffix. A number of prefixed perfectives and imperfectives may occur. In this case verbs with no other stem modification than prefixation are prefixed imperfectives, while the prefixed perfectives are marked by the suffix -n/nō̄-. The derivation pattern in families containing -n/nō̄- is:



2.2.1 The simplest type of family with -n/nō̄- consists of a root verb plus one or more perfectives containing the suffix.

I	P	
S	Sn	
kix-a-ć	kix-noń-Ø-ć	'to sneeze'

2.2.2 With prefixed perfectives and imperfectives we have:

I	I	P	P	
S		Sn		
	pS^{oo}		pSn^{oo}	
bux-a-ć		bux-noń-Ø-ć		'to burst, fall'
	vy-bux-a-ć		vy-bux-noń-Ø-ć	'to explode'

The foregoing are the most frequently occurring verb family types with -n/now-. The following family types have fewer members.

2.2.3 In this type the pS verbs are perfective, with no imperfective counterparts.

I	P	P	
S	Sn		
		pS^{oo}	
bryzg-a-ć	bryz-noń-Ø-ć		'to splash'
		o-bryzg-a-ć	'to bespatter'
		z-bryzg-a-ć	'to splash'
		po-bryzg-a-ć	'to splash on'
		za-bryzg-a-ć	'to drench'

2.2.4 Here both pS and pSn are perfective, though with slightly different shades of meaning.

I	P	P	P	
S	Sn			
		pS∞	pSn∞	
ʒvig-a-ć	ʒvig-noń-Ø-ć			'to carry, lift'
		po-ʒvig-a-ć	po-ʒvig-noń-Ø-ć	'to lift'
		u -ʒvig-a-ć	u -ʒvig-noń-Ø-ć	'to raise'
		etc.	etc.	

2.2.5 In this type the prefixed imperfective verbs show a stem modification.

I	P	P	I	
S	Sn			
		pS∞	pSm∞	
liz-a-ć	liz-noń-Ø-ć			'to lick'
		vy-liz-a-ć	vy-liz-yv-a-ć	'to lick out'
		z -liz-a-ć	z -liz-yv-a-ć	'to lick off'
		etc.	etc.	

2.2.6 In this type a double set of prefixed imperfectives occurs, with and without stem modification.

I	I	I	P	P	
S			Sn		
	pS∞	pSm∞		pSn∞	
trysk-a-ć			trys-noń-Ø-ć		'to splash, gush'
	vy-trysk-a-ć	vy-trysk'-iv-a-ć		vy-trys-noń-Ø-ć	'to spout out'
	op-trysk-a-ć	op-trysk'-iv-a-ć		op-trys-noń-Ø-ć	'to spout onto'
	f- trysk-a-ć	f -trysk'-iv-a-ć		f -trys-noń-Ø-ć	'to splash into'

2.2.7 In this type the prefixed verb without stem modification is perfective in addition to the prefixed perfective with -n/now-. A prefixed imperfective with stem modification occurs.

I	P	P	P	I	
S		Sn			
	pS^{∞}		pSn^{∞}	pSm^{∞}	
max-a-ć		max-noń-Ø-ć			'to wave, flourish'
	vy-max-a-ć		vy-max-noń-Ø-ć	vy-max-yv-a-ć	'to wave, brandish'
	po-max-a-ć			po-max-yv-a-ć	'to wave, brandish'
	za-max-a-ć		za-max-noń-Ø-ć	za-max-yv-a-ć	'to raise a hand to strike'
	etc.		etc.	etc.	

2.2.7.1 In this type the root verb has no perfective counterpart. A set of prefixed perfectives with -n/now- occurs, along with a set with no stem modification. The prefixed imperfectives show further stem modification. The pattern is incomplete in the sample verb, as only four prefixed perfectives without stem modification occur.

I	P	P	I	
S				
	pS^{4}	pSn^{∞}	pSm^{∞}	
vi-Ø-ć				'to wind, twine'
	u-vi-Ø-ć	u-vi-noń-Ø-ć	u-vi-ja-ć	'to make a wreath'
	na-vi-Ø-ć	na-vi-noń-Ø-ć	na-vi-ja-ć	'to wind up'
	po-vi-Ø-ć	po-vi-noń-Ø-ć	po-vi-ja-ć	'to swaddle'
	vy-vi-Ø-ć	vy-vi-noń-Ø-ć	vy-vi-ja-ć	'to unwind'
	---	etc.	etc.	

2.2.8 Here prefixed perfectives with -n/noẅ- alternate with those without that suffix:

I	P	P	I	
S				
	pS∞		pSm∞	
		pSn∞	pSm∞	
gad-a-ć				'to talk'
	po-gad-a-ć		po-gad-yv-a-ć	'to talk'
	na-gad-a-ć		na-gad-yv-a-ć	'to talk a great deal'
	etc.	od-gad-noń-Ø-ć	od-gad-yv-a-ć	'to guess'
		z-gad-noń-Ø-ć	z-gad-yv-a-ć	'to guess'

2.2.9 A number of verb families containing -n-noẅ- have unprefixed secondary imperfectives and represent further variations of the types above.

2.2.9.1 Here there is no compound imperfective.

I	I	P	P	P	
S	Sm		Sn		
		pSm∞		pSn∞	
bženk-a-ć	bženč-e-ć		bženk-noń-Ø-ć		'to hum or jingle'
		za-bženč-e-ć			'to begin to hum or jingle'

2.2.9.2

I	I	I	I	P	P	
S		Sm		Sn		
	pS		pSm		pSn	
drg-a-ć		drž-e-ć		drg-noń-Ø-ć		'to quake,
	za-drg-a-ć		za-drž-e-ć			tremble'

2.2.9.3

I	P	I	P	P	I	
S		Sm	Sn			
	pS$^{\infty}$	pSm		pSn$^{\infty}$	pSm^{2}	
bwysk-a-ć		bwyšč-e-ć	bwys-noń-Ø-ć			'to shine, flash'
				za-bwys-noń-Ø-ć		'to shine forth'
	pše-bwysk-a-ć					'to shine, glitter'

2.2.10 Families in which the root verb shows a longer variant of the root. In these families the root shows an alternation of its vowel with zero. The variant with the vowel appears in the root verb.

2.2.10.1 This is a variant of type 2.2.2.

I	I	P	P	
Sm		Sn		
	pSm$^{\infty}$		pSn$^{\infty}$	
tyk-a-ć		tk-noń-Ø-ć		'to touch'
	do-tyk-a-ć		do-tk-noń-Ø-ć	'to concern'
	vy-tyk-a-ć etc.		vy-tk-noń-Ø-ć etc.	'to point out, accuse'

2.2.10.2

I	I	P	P	
Sm		Smn		
	pSm∞		pSn∞	
wyk-a-ć́		wyk-noń-Ø-ć́		'to swallow'
	po-wyk-a-ć́		po-wk-noń-Ø-ć́	'to swallow'
	pše-wyk-a-ć́		pše-wk-noń-Ø-ć́	'to swallow'
	na-wyk-a-ć́ (śe$\bar{w}$)		---	'to become satiated'

2.2.10.3 Here we have an unprefixed secondary imperfective.

I	I	P	I	P	P
Sm_1	Sm_2	Sn			
			$pSm_1∞$	pSn^2	
					pSm_3n
	dyš-e-ć́	tx-noń-Ø-ć́			
			od-dyx-a-ć́	ode-tx-noń-Ø-ć́	
				na-tx-noń-Ø-ć́	
			z-dyx-a-ć́		z-dex-noń-Ø-ć́

dyšeć́, txnońć́, oddyxać́, and odetxnońć́ mean 'to breathe', natxnońć́ 'to inspire', and zdyxać́, zdexnońć́ 'to expire, "croak"'. txnoń́ć́ is very rare.

2.2.11 Families in which the root verb (imperfective) has the suffix -n/no$\bar{w}$-.

2.2.11.1 In this pattern the root verb corresponds to one or more prefixed perfectives.

I	P	
Sn	pSn∞	
bžyd-noń-Ø-ć́	o-bžyd-noń-Ø-ć́	'to become ugly, loathsome'
	z-bžyd-noń-Ø-ć́	'to become ugly, loathsome'

2.2.11.2 Here we have root verb and prefixed perfectives with the suffix -n/nowˉ-, the prefixed imperfectives without.

I	P	I	
Sn			
	pSn$^{\infty}$	pS$^{\infty}$	
ćong-noń-Ø-ć			'to pull'
	po-ćong-noń-Ø-ć	po-ćong-a-ć	'to pull'
	vy-ćong-noń-Ø-ć	vy-ćong-a-ć	'to pull out'
	etc.	etc.	

2.2.11.3 Here the root verb and prefixed perfectives show the suffix -n/nowˉ- and the prefixed imperfectives show a further modification. There may or may not be a perfective counterpart to the root verb.

I	P	I	
Sn			
	pSn$^{\infty}$	pSm$^{\infty}$	
mk-noń-Ø-ć			'to zoom'
	po-mk-noń-Ø-ć	po-myk-a-ć	'to move forward'
	vy-mk-noń-Ø-ć	vy-myk-a-ć	'to shove away'
	u-mk-noń-Ø-ć	u-myk-a-ć	'to flee, escape'

2.3 Root verb perfective. The great majority of Polish verb families have imperfective root verbs, but a small number have perfective root verbs.

2.3.1 Most commonly, the perfective root verb has an imperfective counterpart with stem modification.

Prefixed imperfectives will show the same stem modification. Prefixed perfectives will show the stem of the root verb with the addition of their respective prefixes.

P	P	I	I	
S		Sm		
	pS		pSm	
d-a-ć́		da-v-a-ć́		'to give'
	po-d-a-ć́		po-da-v-a-ć́	'to hand over'
	od-d-a-ć́		od-da-v-a-ć́	'to return'
	do-d-a-ć́		do-da-v-a-ć́	'to add'
	etc.		etc.	

2.4 Families with no unprefixed root verb. A small number of verb families has no unprefixed root verb, but simply a number of prefixed aspect pairs, the imperfective member of each showing some variation in its stem with respect to the perfective counterpart.

P	I	
pS∞	pSm∞	
za-watf-i-ć́	za-watfj-a-ć́	'to settle, take care of'
u-watf-i-ć́	u-watfj-a-ć́	'to facilitate'

2.5 Families with more than one root. In a few cases verb families show two roots. In these cases the following constellations occur.

2.5.1 In this type we have prefixed perfectives made on the stem of the perfective root verb and prefixed imperfectives made on the stem of the imperfective root verb with modification.

I	I	P	P	
S_1		S_2		
	pS_1m^{∞}		pS_2^{∞}	
kwaś-Ø-ć́		wož̌-y-ć́		'to put, lay'
	pše-kwad-a-ć́		pše-wož̌-y-ć́	'to carry over, translate'
	etc.		etc.	

2.5.2 Here we have two imperfective root verbs, with prefixed imperfectives made on the stem of the one and prefixed perfectives made on the stem of the other. A secondary unprefixed imperfective is made by modification of the stem of the root verb on which the prefixed imperfectives are based.

I	I	I	I	P	
S_1		S_1m	S_2		
	pS_1^{∞}			pS_2^{∞}	
xoʒ́-i-ć́ 'to go (habitually)'		xaʒ-a-ć́ 'to go sporadically)'	iś-Ø-ć́ 'to go (as continuous action)'		
	f-xoʒ́-i-ć́			ve-jś-Ø-ć́	'to enter'
	vy-xoʒ́-i-ć́ etc.			vy-jś-Ø-ć́ etc.	'to go out'

2.5.3 Here is another pattern with two root verbs.

I	P	I	P	P	
S_1			S_2		
	pS_1^{∞}	pS_1m^{∞}			
		pS_1m		pS_2	
br-a-ć́			vźoń-Ø-ć́		'to take'
	ze-br-a-ć́	z-bjer-a-ć́			'to gather'
	vy-br-a-ć́ etc.	vy-bjer-a-ć́ etc.			'to choose'
		po-bjer-a-ć́		po-vźoń-Ø-ć́	'to get, resolve'

3.0 Classification of alternations occurring between members of a verb family.

Alternations occurring between members of a verb family comprise prefixation, suffixation, shift of thematic class, and root modification.

Prefixation (contrasted with its absence) marks the perfective member of an aspect pair. It does not occur together with other features in

distinguishing aspect counterparts. That is, when the perfective member of the pair is distinguished by prefixation, the rest of the stem is the same in both members of the pair, whereas if the aspect counterparts are distinguished by some other formal feature, prefixation will be present or absent in both members of the pair. Only the perfective counterparts of root verbs are marked by prefixation. Variation of the various prefixes serves to distinguish the aspect pairs within a verb family from each other.

Suffixation. The suffixes which play a role in distinguishing members of a verb family are -n/now- (occurring only in verbs of thematic class e), -u/ov- and -u/yv- (e/a-verbs), and -v- (sometimes in e/a-verbs, but usually in a-verbs). The presence of -n/now- (contrasted with its absence) marks the perfective member of an aspect pair. In this it is similar to prefixation, and in some types of verb families this suffix, rather than prefixation, marks the perfective counterpart of the root verb. However, unlike prefixation, it can occur together with other kinds of alternation in distinguishing members of an aspect pair and it can mark prefixed perfectives as well as perfective counterparts to root verbs. The presence of the remaining suffixes (versus absence of a given suffix) serves to mark the imperfective member of an aspect pair. They too can occur togeher with other types of alternation.

Shift of thematic class almost always accompanies any stem alternation other than prefixation and occurs alone as a distinguishing feature in aspect pairs in a great number of cases. If one verb of an aspect pair is of the a or e class (the counterpart being of some other class) and no suffixation is involved as a distinguishing feature, the a and e verb will be the imperfective member of the pair.

Modification of the verb root may involve root final consonant alternation conditioned by alternation of the subsequent element. Such alternation will be of the nature of substitutive softening ("Morphophonemics" 2.1.1) or alternation of the root final consonant with zero.[10] Other types of root modifications are addition of root extension -a (in the case of P d-a-ć, I da-v-a-ć) and -e (in a number of cases where the stem of the root verb has thematic e in some form) before the suffix -v-, alternation of root-internal vowel, and alternation of root internal consonant.[11] Root internal consonant alternations involve substitutive softening and usually occur together with root internal vowel alternation.

Below will be listed the combinations of alternations (stem modification) occurring between members of aspect pairs and between root verbs and unprefixed secondary imperfectives (the same kinds of alternations are involved in both cases). As we have seen, prefixation does not occur conjointly with other features in distinguishing aspect counterparts and so will be omitted in the listing below. Since shift of thematic class is involved in the vast majority of these combinations, they will be classified on the basis of the thematic classes involved. In each case, the variants occurring in the imperfective member of the aspect pair (or unprefixed secondary imperfective) will be listed first (on the left), followed by the variants occurring in the perfective member (or root verb).

The same convention will be followed in citing examples, the imperfective member being listed first, followed by the perfective.

3.1 Imperfective verb of a class.

3.1.1 a:a. (Counterpart verb of a class, no change of thematic vowel.)

3.1.1.1 Root vowel modification.

y Ø: s-pyx-a-ć: ze-px-a-ć 'to push (off or down)'

3.1.2 a:ě

3.1.2.1 Suffixation plus root-extension.

-e, -v-: po-roz-umje-v-a-ć: po-roz-umj-e-ć 'to come to an understanding'

3.1.2.2 Alternation of root vowel conditioned by alternation of root-final consonant.

e ∽ a: po-vjad-a-ć: po-vjeź-e-ć 'to tell, order'

3.1.3 a:e

3.1.3.1 No other alternation (than thematic class shift).

vy-krad-a-ć: vy-kraś-Ø-ć (pres. vy-krad-e-w̄) 'to steal'

bi-ja-ć: bi-Ø-ć 'to beat'

Note that after roots ending in a front vowel j is prefixed to the thematic vowel (see "Morphophonemics" 1.1.13). This particular correspondence does not occur with roots ending in a back vowel (these take the suffix -v-; see below).

3.1.3.2 Alternation of root vowel.[12]

y ∽ Ø: za-čyn-a-ć: za-čoń-Ø-ć (pres. za-čn-e-w̄) 'to begin'

i ∽ Ø: na-gin-a-ć: na-gjoń-Ø-ć (pres. na-gn-e-w̄) 'to bend'

o ∽ a: po-mag-a-ć: po-mu-Ø-ć (pres. po-mog-e-w̄) 'to help'

3.1.3.3 Alternation of root vowel accompanied by root-internal consonant change.

Consonant change: stage I before zero, stage II before vowel.

i ∽ Ø: na-ćin-a-ć: na-ćoń-Ø-ć (pres. na-tn-e-w̄) 'to cut'

Consonant change: stage I before zero or a, stage II before other vowel.

e ∽ Ø[2]: ob-žer-a-ć: obe-dž-e-ć (l-form: ob-dar-Ø-Ø-Ø) 'to peel'

3.1.3.4 Suffixation.

-n-/now̄-: bux-a-ć: bux-noń-Ø-ć 'to fall or burst'

-v-: wy-čuv-a-ć: wy-čuv-Ø-ć 'to feel'

When the thematic class correspondence is a:e, the suffix -v- occurs only with roots ending in u or y.

3.1.3.5 Suffixation plus

-n/nowˉ-

o ∽ a: po-xwań-a-ć́: po-xwo-noń-Ø-ć́ 'to swallow up, devour'

y ∽ Ø: po-wyk-a-ć́: po-wk-noń-Ø-ć́ 'to swallow'

y ∽ (e ∽ Ø[1]): z-dyx-a-ć́: z-dex-noń-Ø-ć́ 'to expire, "croak"'

(cf. tx-noń-Ø-ć́ 'to breathe into')

-n-now-, -v-

e ∽ o[2]: vy-źo-noń-Ø-ć́ 'to die, expire'

3.1.4 a:i

3.1.4.1 No other alternation.

vy-pewń-a-ć́: vy-pewń-i-ć́ 'to fill out'

spenʒ-a-ć́: speńźi-ć́ (pres. spenʒ-e-wˉ) 'to spend'

3.1.4.2 Root vowel alternation.

o ∽ a: z-val-ń-a-ć́: z-vol-ń́-i-ć́ 'to free'

3.1.4.3 Alternation of root-internal vowel and preceding consonant plus alternation of root-final consonant.

Root internal consonant: stage I before o, stage II before e.

Root final consonant: stage I before thematic a, stage II before i.

e ∽ o[1]: ot-fjer-a-ć́: ot-fož-y-ć́ 'to open'

3.1.5 a:a/ě.

3.1.5.1 Suffixation plus root extension.

-e, -v-: mje-v-a-ć́: mj-e-ć́ 'to have'

3.1.6 a:e/a.

3.1.6.1 Suffixation.

-v-: do-le-v-a-ć́: do-l-a-ć́ (pres. do-le-je-wˉ) 'to add by pouring'

3.1.6.2 Root vowel alternation.

y ∽ Ø: vy-syw-a-ć́: vy-sw-a-ć́ 'to send out'

3.1.7 a:i/a.

3.1.7.1 Root vowel alternation.

y ∽ Ø: sypj-a-ć: sp-a-ć (pres. śpj-e-w̄) 'to sleep'

3.1.8 a:i/ě

3.1.8.1 Root vowel alternation.

i ∽ Ø: za-pomin-a-ć: za-pomń-e-ć (pres. za-pomn-e-w̄) 'to forget'

3.2 Imperfective verb of i class.

3.2.1 i:e.

3.2.1.1 Root-internal consonant alternation.

Consonant: stage I in imperfective, stage II in perfective (or root verb).

noś-i-ć: neś-Ø-ć (pres. nos-e-w̄) 'to carry'

3.2.2 i:e/a.

3.2.2.1 Irregular root alternation.

jeź-i-ć: jex-a-ć 'to ride, drive'

3.3 Imperfective verb of e/a class.

3.3.1 e/a:e/a (no change of thematic vowel type)

3.3.1.1 Suffixation.

-u/yv-: ob-liz-yv-a-ć: ob-liz-a-ć 'to lick over'

3.3.2 e/a:a

3.3.2.1 Suffixation.

-u/yv-: do-ček'-iv-a-ć: do-ček-a-ć 'to wait for'

3.3.2.2 Suffixation plus root extension.

-a-, -v-: da-v-a-ć: d-a-ć 'to give'

3.3.3 e/a:e.

3.3.3.1 Suffixation.

-n/now̄-: liz-a-ć: liz-noń-Ø-ć 'to lick'

-u/ov-: z-na-jd-ov-a-ć: z-na-leś-Ø-ć (pres. z-na-jd-e-w̄) 'to find'

-n/noẅ-, -u/yv-: o-kšyk-iv-a-ć: o-kšyk-noń-Ø-ć 'to proclaim'

-n/noẅ-, -v-: sta-v-a-ć: sta-Ø-ć (pres. sta-n-e-ẅ) 'to stand, become'

3.3.3.2 Suffixation plus root extension.

-o, -n/noẅ-: ź-a-ć: źo-noń-Ø-ć 'to exhale'

3.3.4 e/a:i.

3.3.4.1 Suffixation.

-u/ov-: kup-ov-a-ć: kup-i-ć 'to buy'

3.3.4.2 Suffixation plus root-final consonant alternation.

Consonant: stage I before -u/yv-, stage II before i.

-u/yv-: pšy-patr-yv-a-ć: pšy-paču-y-ć 'to look at'

3.3.4.3 Suffixation plus root vowel alternation.

-u-yv-, (e∽o)ẅ[1]: vy-kup-yv-a-ć: vy-kup-i-ć 'to buy out'

3.3.5 e/a:i/ě.

3.3.5.1 Suffixation plus root-final consonant alternation.

Consonant: stage I before -u/yv-, stage II before i/ě.

-u/yv-: po-leg'-iv-a-ć: po-leže-e-ć 'to lie a while'

3.4 Imperfective verb of i/ě class.

3.4.1 i/ě:a. Verbs in this category are unprefixed secondary imperfectives occurring in family types containing -n/noẅ-.

3.4.1.1 Root-final consonant alternation.

Consonant: stage I before a, stage IIa before i/ě.

bwyšče-e-ć: bwysk-a-ć 'to flash'

3.4.2 i/ě:e

3.4.2.1 Suffixation plus root final consonant alternation.

Consonant: stage I before -n/noẅ-, stage IIa before i/ě.

-n/noẅ-: burče-e-ć: burk-noń-Ø-ć 'to rebuke, reprimand'

4.0 The aspect categories are not marked by any one morphological feature. Nor are there morphological features which simply by their occurrence signal membership in one or the other of the aspect categories. Rather there are features which, contrasted either with their absence or with presence of some other feature in a counterpart verb, serve as aspect markers. Thus, prefixation and thematic e class contrasted with another thematic class and the suffix -n/now̄- contrasted with their absence serve as perfective markers, while the suffixes -u/yv-, -u/ov-, and -v- contrasted with their absence serve as imperfectives markers. These features contrasted with their absence in a counterpart verb always serve as markers of one of the two aspects. There are still other features which, when contrasted with their absence or with some other feature, serve as aspect markers unless a marker from the first group indicating the opposite aspect is present. Such features are thematic a class contrasted with any other class (with the exception of the dać family, where the -v- suffix in davać outweighs the thematic a in dać, thematic a class contrasted with any other class always indicates the imperfective member of an aspect pair), a root vowel contrasting with a zero alternant or root vowel a contrasted with any other root vowel, all of which indicate the imperfective member of an aspect pair. Since both root extensions and root-final consonant alternation are conditioned by the elements which follow them, it is doubtful whether they can be considered aspect markers in the same sense as the above elements. Root extension and root final stage I consonants (excepting stage I consonant before -n/now̄-) always occur in the imperfective member of a pair contrasting with their absence and stage II consonants respectively in the other (perfective) member. The fairly infrequent root-internal consonant changes are usually conditioned by the alternation of a vowel with zero, stage II appearing before the vowel (imperfective) and stage I before

zero (perfective). In the one case where this alternation is not conditioned by a root-internal vowel alternation (verbs like nośić: nésć 3.2.1.1) stage I appears in the imperfective partner and stage II in the perfective.

It is seen that the aspect categories, which refer to what is probably a single semantic distinction, are marked by an interlocking system of formal features occurring on the morphophonemic, morphemic, and the syntactic levels.

5.0 Morphemic status of aspect markers.

The morphemic status of prefixes, stem-suffixes, and thematic vowels has already been established in Polish Verb I. Root-final consonant changes and root extensions, being always conditioned by the element following them, are morphophonemic alternations without status as independent morphemes. Since root-internal consonant and vowel alternations almost always occur with the alternation of elements having morphemic status, they could thus also be considered not to have status as morphemes, were it not for a few inconvenient exceptions such as the pair spyxać: zepxać, where the only difference between the two verbs lies in the root-internal alternation y ∽ Ø.

In these cases the alternation is the sole distinguishing feature between the verbs of an aspect pair. Since the members of the pair are obviously not free variants, one must either posit -pyx and -px- as separate morphemes (which would upset the pattern of occurrence of verb root morphemes in verb families as well as ignore the phonetic and semantic resemblance of the two segments) or posit root-internal alternation as a morpheme. The latter solution appears to more nearly reflect the structure of the language.

Footnotes

1. However, some verb bases represent not single morphemes but combinations of two or more morphemes. Such bases occur in verbs derived from nouns or adjectives with suffixes. These nominal derivative suffixes which play no part in verb morphology are considered part of the base of the verbs in which they occur and not as verbal stem-suffixes. Thus, vol-a 'will, wish', vol-n-y 'free', z-vol-ń-i-ć 'to free'. The base of the latter verb is vol-ń-.

2. This section does not treat variation between the bases of related verbs, as it is concerned only with variation within the paradigms of individual verbs. The variation between the paradigms of related verbs (principally the formal relationship between perfective and imperfective verbs) is treated in the following section "Polish Verb II".

3. By identical I mean that they are not only the same morpheme, but have the same phonemic shape.

4. The grouping of the various endings (allomorphs) into morphemes is performed on the basis of syntactic environment. Individual allomorphs are assigned to particular morphemes on the basis of the possibility of their occurrence in the same construction with the nominative of the various personal pronouns. On this basis we may justify the inclusion of identical allomorphs (zero, for example) in three different morphemes. For discussion of a similar problem see the Appendix to 13.43, page 215, in Z.S. Harris, Methods in Structural Linguistics (Chicago, 1950).

Positing a morpheme which is always phonemically zero is somewhat unconventional, though there is precedent in other analyses. However, the environment of this morpheme is always phonemically or morphemically differentiable and the morpheme contrasts with the other verb-ending morphemes.

5. It may be noted that, when there is a variation of stem within the present-stem forms, in the overwhelming majority of cases the -w-forms and present participle have the same base variant and in all cases the third person plural of the present tense and the present participle have identical stems.

6. In the traditional orthography the gerund formant is written -wszy postvocalically and -łszy postconsonantally. The ł in the postconsonantal writing is "silent" in normal speech, as it is postconsonantally in the masculine singular l-form. However, since the gerund is preeminently a literary form, practically never occurring in colloquial speech, many persons have a spelling pronunciation whereby the postconsonantal variant of the gerund formant is -uši (since CwC does not occur in the Polish phonological system, in trying to pronounce the ł they say u). When this pronunciation is used, the stress does not shift to the penultimate vowel u, but remains on what would be the penult were no u pronounced. Such speakers also use a spelling pronunciation when reading or citing the masculine singular l-form, pronouncing the written final ł as u when ł follows a consonant, though in normal speech the formant is zero in such a position. Here too the stress remains on what would normally be the penultimate syllable.

7. The perfective and imperfective categories may be defined in terms of syntactic features. This is done in section 1.0 of part II of this study.

8. With the possible exception of być itself.

9. My use of 'present' in present tense represents merely the retention of a convenient traditional designation and must in no case be understood as implying anything about the meaning conveyed by this particular

morphological category. From the semantic point of view, a more accurate designation would be 'non-past' (It represents, in Prague-style terminology, the 'unmarked' member of a semantic opposition, past vs. non-past).

10. Before the prefix -n/no$\overline{w}$- roots ending in -sk-, -zg-, -n-, or -ń- (and occasionally other consonants) lose their final consonant. Thus, bwys-noń-Ø-ć, etc.

11. The root extensions may be considered as further examples of the alternation of the respective vowels with zero (see "Morphophonemics" 1.5.2.1.5).

12. When alternation of root vowel is listed, only the principal alternation within the morpheme is given. Combinations due to variations within the paradigm are not listed. Thus, in začynać: začońć, we actually have an alternation y$\frown$(Ø$\frown$(o$\frown$e)$\overline{w}^{1}$), but only the principal alternation y$\frown$Ø is given as occurring between the two paradigms. Combinations of alternations will be listed only in the few cases where one variant of a subordinant alternation is contrasted with a variant of the principal alternation as in mavjać: muvić, where only u occurs in the paradigm muvić (o occurring in other paradigms, such as rozmova 'conversation'). Here we list a$\frown$(o$\frown$u).

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